MIDDLESEX UNIVERSITY



CATALOGUE
1938-1939

WALTHAM MASSACHUSETTS

STATEMENT

The Annual Catalogue, published well in advance of the school year to which it applies, contains a condensed record of the University Faculty and of the Courses of Instruction to be offered by the various Schools and Departments, and announcements relative to the calendar, requirements for admission and graduation, fees, examinations, and rules for student conduct.

The provisions of this catalogue are not intended to be taken as a basis for the contractual relationship arising between the University and its students. The purpose of the Officers and Trustees is continuously to improve the methods and standards of instruction, and they reserve to themselves the right and responsibility of altering at any time the curriculum, requirements, teaching personnel, fees, and rules, as circumstances may require, or as they may deem to the best advantage of the University.

CATALOGUE OF

MIDDLESEX UNIVERSITY

THE SCHOOL OF MEDICINE
THE COLLEGE OF ARTS AND SCIENCES
THE SCHOOL OF PODIATRY
THE SCHOOL OF PHARMACY
THE SCHOOL OF VETERINARY MEDICINE



1938-1939

WALTHAM MASSACHUSETTS

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University Calendar

1938

June 11	Saturday	Seniors' Class Day.
June 12	Sunday	Baccalaureate Service.
June 13	Monday	Commencement Exercises.
July 5	Tuesday	Summer session begins.
August 13	Saturday	Summer session ends.
September 5 to 10	Monday to Saturday	First installment of tuition due.
September 19 to 24	Monday to Saturday	Examinations for the removal of conditions.
September 26	Monday	Fall Session opens.
October 12	Wednesday	Columbus Day. A holiday.
November 11	Friday	Armistice Day. A holiday.
November 23 to 27	Wednesday to Sunday	Thanksgiving Recess.
November 28	Monday	Classes resumed.
December 19 to 24	Monday to Saturday	Second installment of tuition due.
December 19, 1938, to January 2, 1939	Christmas Vacation	

1939

January 3	Tuesday	Classes resumed.
February 22	Wednesday	Washington's Birthday. A holiday
March 20 to 25	Monday to Saturday	Third installment of tuition due.
March 20 to 26	Monday to Sunday	Spring recess.
March 27	Monday	Classes resumed.
April 19	Wednesday	Patriot's Day. A holiday.
May 30	Tuesday	Memorial Day. A holiday.
June 10	Saturday	Seniors' Class Day.
June 11	Sunday	Baccalaureate Service.
June 12	Monday	Commencement Exercises.
July 10	Monday	Summer session begins.
August 19	Saturday	Summer session ends.

Officers, Trustees, and Directors of Middlesex University

C. Ruggles Smith
President

Frank L. Whipple
First Vice-President

John M. Russell
Second Vice-President

John Hall Smith
Treasurer

Horatio S. Card
Secretary

Mabel B. Smith
Recorder

TRUSTEES

Joseph I. Cheskis
Howard Charles Gale
T. Vincent Campagna
Hiram B. Donaldson
Harold M. Kaplan
Charles A. P. McAree
Martin L. Macdonald
Rose F. Jannini
Harry R. Bolan
Solomon H. Gordon
Marion B. MacCormack
Hugh Wallace Smith
Edward D. Leete
Thomas J. Smith
Carl B. Lindholm

Officers of Administration

President
C. Ruggles Smith, A.B., M.A., B.Litt., LL.B.

Registrar
Frank L. Whipple, A.B., A.M., B.D., M.D.

Dean of the College of Arts and Sciences
Joseph I. Cheskis, A.B., A.M., Ph.D.

Dean of the School of Medicine
William M. Konikov, A.B., M.D.

Dean of the School of Veterinary Medicine
John Hall Smith, M.D.

Dean of the School of Podiatry
Hiram B. Donaldson, Pod.G.

Dean of the School of Pharmacy
Horatio S. Card, A.B., A.M., M.D.

University Marshal
Howard Charles Gale, A.A., S.T.B., M.D.

Counsel
John M. Russell, A.B., LL.B.

Auditor
T. Rutherford Edwards, C.P.A.

Physicians to Students
Martin L. Macdonald, M.D.
Rose F. Jannini, M.D.

Business Manager
MABEL B. SMITH

Bursar
MARJORIE K. FAXON

Librarian
MILDRED C. ALBERT

Assistant to the Registrar
JULIA O'LEARY

Director of Publicity
ALBERTA LOVEGREN

Clinical Directors
HARRY R. BOLAN, A.B., M.D.—*Middlesex Hospital*
HERBERT W. JOHNSTON, Pod.G.—*University Dispensary*

Clinical Supervisor
ANNE T. MCGRATH, R.N.

Faculty of The University

THE list of faculty, comprising the professors, associates, assistants, and instructors, in the various schools of the University, includes those engaged in teaching during the session 1937-1938, and those who have been appointed up to January 1, 1938, for the session 1938-1939. The complete list of faculty appointments for the 1938-1939 school year will not be available until September, 1938. It is anticipated that a substantial number of important additions to the faculty roster, particularly in the newly established departments, will be announced during the intervening period.

C. Ruggles Smith, *President* . . . *English, Jurisprudence*
A.B., LL.B., Harvard; M.A., B.Litt., Columbia

John Hall Smith, *Professor Emeritus*
Anatomy, Clinical Surgery
M.D., University of Louisville

Horatio S. Card . . . *Clinical Medicine, Toxicology*
A.M., M.D., Bowdoin

Joseph I. Cheskis *Bacteriology*
A.B., University of Paris; A.M., Ph.D., Harvard

Frank L. Whipple *Latin*
A.M., Dartmouth; B.D., Andover; M.D., Tufts

Harold M. Kaplan *Biology, Physiology*
A.B., Dartmouth; Ph.D., Harvard

William M. Konikov *Anatomy, Histology*
A.B., Harvard; M.D., Boston University

Louis Loeffler *Pathology*
M.D., Martin Luther University

Edward J. Levenson *Practice of Medicine*
A.B., Harvard; M.D., University of Rochester

Nathan R. Brewer . . *Physiology, Veterinary Medicine*
B.S., D.V.M., Michigan State; Ph.D., University of Chicago

Solomon H. Gordon *Chemistry*
B.S., Massachusetts State College; Ed.M., Boston University

Albert M Stone *Physics, Mathematics*
A.B., Harvard; M.S., Technology

Charles A. P. McAree *History*
A.B., Catholic University; A.M., Harvard

Edmund I. Zawacki *English, French*
B.S., A.M., Harvard

John M. Russell *Jurisprudence*
A.B., Catholic University; LL.B., Harvard

George Demeter *Government*
A.B., Harvard University; LL.B., Boston University

T. Vincent Campagna . . . *Pharmacology, Therapeutics*
M.D., Middlesex

Howard Charles Gale *Obstetrics*
A.A., S.T.B., Tufts; M.D., Middlesex

Louis A. Dewing *Clinical Medicine*
M.D., University of Pennsylvania

Edward D. Leete *Obstetrics*
M.D., Jefferson

Martin L. Macdonald *Surgery*
M.D., Middlesex

Isidore Green *Neurology, Psychiatry*
M.D., Tufts

Harry R. Bolan *Clinical Medicine*
A.B., Harvard; M.D., Middlesex

Anthony J. West *Surgery*
M.D., Tufts

Francis Licata *Public Health*
M.D., Middlesex

Joel Applebaum *Surgery*
M.D., Tufts

John F. Correa *Gynecology*
Ph.G., Massachusetts College of Pharmacy; M.D., Middlesex

Cole D. Genge *Roentgenology*
Ph.B., Ripon; M.D., Duke

Angelo Maietta *Immunology*
M.D., Middlesex

Israel Kahalas *Medicine*
M.D., Tufts

Arthur Vilker *Clinical Medicine*
M.D., Middlesex

A. Harold Radin *Oto-laryngology*
M.D., Tufts

Arthur O. Bruce *Ophthalmology*
M.D., Middlesex

H. H. Shuman *Pediatrics*
B.S., M.D., University of Vermont

Alfred S. Otway *Internal Medicine*
M.D., Middlesex

Solomon P. Bialow *Pharmacology*
Ph.G., Brooklyn College of Pharmacy; M.D., Middlesex

Jacob Norman *Medicine*
M.D., Boston University

Hugo G. Guidotti *Pathology*
M.D., Middlesex

Jacob Spitz *Dermatology*
M.D., Tufts

Vincent J. Canzaniello *Anatomy*
M.D., Middlesex

Irving Showstack *Diagnosis*
M.D., Tufts

Warren Wilkins *Physiology*
M.D., Middlesex

Thomas F. Quinn *Clinical Medicine*
M.D., Middlesex

N. F. De Cesare *Clinical Surgery*
M.D., Tufts

Paul A. Oskar *Clinical Medicine*
M.D., Middlesex

Robert H. Nichols *Medicine*
M.D., Middlesex

Julius Rubin *Anatomy*
M.D., Middlesex

Louis J. Avallone *Medicine*
M.D., Middlesex

I. W. Josselson *Surgery*
M.D., Middlesex

Virgil Abele *Clinical Medicine*
M.D., Middlesex

Guy R. Sweeney *Surgery*
M.D., Middlesex

A. P. Bloomenthal *Medicine*
M.D., Middlesex

Louis N. Altshuler *Physical Therapy*
M.D., Middlesex

Benjamin I. Nadelman *Obstetrics*
M.D., Middlesex

Francis J. Burger, Jr. *Medicine*
M.D., Middlesex

Clarence London *Pediatrics*
M.D., Middlesex

William P. Conlan *Medicine*
A.M., Fordham; M.D., Middlesex

A. Carl Wiseblatt *Histology*
M.D., Middlesex

Manuel F. Amaral *Clinical Surgery*
M.D., Middlesex

Cecil Smith *Clinical Medicine*
M.D., Middlesex

Donald Peggs *Clinical Medicine*
M.D., Middlesex

William Weisman *Clinical Medicine*
M.D., Middlesex

Anthony G. Zarella *Clinical Obstetrics*
M.D., Middlesex

Albert Biller *Clinical Medicine*
M.D., Middlesex

Victor Agranat *Medicine*
M.D., Middlesex

Harold Newlander *Surgery*
M.D., Middlesex

Morris J. Sacks *Obstetrics, Gynecology*
M.D., Middlesex

Graziano Capodilupo *Clinical Obstetrics*
M.D., Middlesex

Charles G. Berger *Medicine*
M.D., Middlesex

William C. Sloane *Surgery*
M.D., Middlesex

John Hugh Tucci *Gynecology*
A.B., Harvard; M.D., Middlesex

Philip Levine *Surgery*
M.D., Middlesex

I. Jacques Yetwin *Physiology*
B.S. Rutgers; M.S., University of Chicago

Ruth Irwin *Dietetics*
B.S., University of Maine

Myer Perlstein *Bacteriology*
B.S., Columbia

Benjamin Spelfogel *Biology*
B.S., Boston University; A.M., Harvard

Katherine G. Kelley *English*
A.B., Emmanuel

Leonard Goulde *Psychology*
B.S., Tufts

Rudolph Sibley *Veterinary Medicine*
D.V.S., Ontario Veterinary College

Cornelius F. Sullivan . . *Clinical Veterinary Medicine*
D.V.M., University of Pennsylvania

Terrence J. Burke *Veterinary Surgery*
D.V.S., Ontario Veterinary College; B.V.S., University of Toronto

Jay F. Harbert *Animal Husbandry*
B.S., Louisiana State University

Hiram B. Donaldson *History of Podiatry*
Pod.G., Middlesex

Herbert W. Johnston *Orthopedics*
Pod.G., Middlesex

Walter B. Horne *Podiatry*
Pod.G., Middlesex

A. A. Belanger *Podiatry*
Pod.G., Middlesex

Ralph G. Perkins *Therapeutics*
Pod.G., Middlesex

Joseph Guy *Podiatry*
Pod.G., Middlesex

Benjamin Lelyveld *Bacteriology*
Pod.G., Middlesex

Warren Hookway *Physical Therapy*
Pod.G., Middlesex

WILLIAM A. DOYLE *Clinical Podiatry*
Pod.G., Middlesex

HAROLD D. MILLEN *Podiatry*
Pod.G., Middlesex

JOHN A. REDMOND *Clinical Podiatry*
Pod.G., Middlesex

ARTHUR F. GOOD *Clinical Podiatry*
Pod.G., Middlesex

HUGH J. GALLAGHER *Clinical Podiatry*
Pod.G., Middlesex

SAWYER KANTER *Clinical Podiatry*
Pod.G., Middlesex

JOHN D. MCLEAN *Clinical Podiatry*
Pod.G., Middlesex

DOMINIC T. SABINO *Clinical Podiatry*
Pod.G., Middlesex

WILBUR F. WELCH *Clinical Podiatry*
Pod.G., Middlesex

CHARLES A. GIRVAN *Clinical Podiatry*
Pod.G., Middlesex

BENJAMIN P. HECHT *Pharmacy*
B.S., Ph.C., Massachusetts College of Pharmacy

LEONARD D'ORLANDO *Pharmacy*
Ph.G., Massachusetts College of Pharmacy;
B.S., Boston University

RUSSELL BRODMAN *Pharmacy*
Ph.G., Philadelphia College of Pharmacy; A.B., Temple

HAROLD HECHT *Pharmacy*
Ph.G., Massachusetts College of Pharmacy

History

THE history of Middlesex University may be traced on the statute books of the Commonwealth of Massachusetts. The first of its component schools was chartered in 1849, and its development into a University was made possible by a series of legislative acts and charters in 1850, 1851, 1917, 1935, and 1937. It is empowered to confer degrees in Arts, Sciences, Medicine, Veterinary Medicine, Podiatry, and Chiropody.

The charter of Middlesex University authorizes its Board of Trustees to receive and hold real or personal estate by gift, grant, devise, bequest, or otherwise, to an amount not to exceed five million dollars, and provides that the clear income of the institution shall be applied to the endowment of the University in such manner as most effectually to promote its general educational purposes.

Middlesex University has achieved a high reputation for its freedom from bigotry and intolerance, and from racial or religious discrimination. The perpetuation of this policy is assured by the terms of its charter, which provides that "No officer or instructor in said University shall ever be required by the trustees to profess any particular religious opinion as a test of office, and no student shall be refused admission to or denied any of the privileges, honors, or degrees of said college on account of the religious opinions he may entertain".

Grounds and Buildings

The ninety-six acre campus of Middlesex University, situated on wooded heights in the outskirts of Waltham, commands a view

of the valley of the Charles River as it winds its course to Boston ten miles away. The rugged battlements of the Norman-Gothic group of University buildings, erected during the past ten years, rise from a high ledge of rock, and the silhouette of their towers and parapets presents the aspect of a medieval castle. The administrative offices and library of the University, as well as the classrooms and laboratories of the College of Arts and Sciences, the School of Medicine, and the School of Veterinary Medicine, and the extensive stables and barns of the department of Animal Husbandry, are situated on the Waltham campus.

The Back Bay Building, located at 415 Newbury Street, in the heart of the professional district of up-town Boston, houses the classrooms, clinics, and laboratories of the School of Podiatry and of the School of Pharmacy. It also contains an auditorium, large enough to accommodate the entire student body of the University, and a spacious gymnasium with a basketball floor and an indoor running track.

Across the river in Cambridge is located the Middlesex Hospital, which is affiliated for teaching purposes with the School of Medicine. Seating arrangements in its modern surgical amphitheater provide space for large numbers of medical students to witness operations or other demonstrations.

Student Accommodations

The future building plans of Middlesex University call for the construction of a dormitory on the Waltham Campus. At the present time students find satisfactory living quarters within walking distance of the classrooms. Room and board may be secured with a private family at an average weekly cost of $10.00, and there are a number of conveniently located restaurants. The University maintains a list of approved rooming houses.

Students in attendance in those departments housed in the Back Bay Building may secure rooms at the Boston Y.M.C.A., 316

Huntington Avenue, or at other satisfactory places in the neighborhood. Women students are recommended to the Y.W.C.A., 140 Clarendon Street; Boston Students' Union, 81 St. Stephen Street; or the Franklin Square House, 11 East Newton Street; where accommodations exclusively for women may be obtained at moderate prices. Students arriving from out of town are advised to call first at the Back Bay Building where an appointment can be made for an interview with the Registrar before proceeding to the Waltham Campus.

Scholarship and Loan Funds

The Bangs-Perrins Scholarship was founded and endowed by Dr. John Hall Smith in memory of Professor Charles Howard Bangs and President John Perrins, both prominent in the early history of Middlesex College. The income from this fund provides a limited number of full scholarships available to both men and women, citizens of Massachusetts, in any department of the University. Applicants for these scholarships must have very high scholastic standing and must be in actual need of financial assistance. Continuance of the scholarship from one year to another depends upon the recipient's moral, social, and scholastic qualifications. All scholarship applicants must have a personal interview with the President and Dean of the respective School.

There are also available a limited number of service scholarships covering the cost of tuition. Recipients of these scholarships must have proper qualifications to serve as laboratory assistants or otherwise.

The Roger Sherman York fund for student loans makes it possible for a limited number of applicants to borrow a portion of their tuition fees, and to repay these advances during the summer vacation or after graduation.

Discipline and Dismissal

The University reserves the right to dismiss at any time a student whose deportment or scholarship is unsatisfactory, and to refund a proportional part of the current tuition fee he has paid. Admission to the University is in all cases for one year only, and readmission may be denied without explanation.

Admission as a Special Student

Applicants of mature age may be admitted as special students without satisfying the general entrance requirements of the respective schools, provided they give evidence of adequate preparation for the course elected. Special students, however, will not be accepted as candidates for any degree conferred by the University.



Middlesex Reaches to the Sky

The Watch Tower on the Administration Building on Middlesex University's hill-top campus is the loftiest structure in Waltham. To the right are laboratories and the five-story medical class-room building.



The School of Medicine

This view taken from within the quadrangle on the Waltham Campus shows the principal structures of the medical school. On the left is the Anatomy and Physiology Building, in the center the Dean's Office and the Observation Tower, to the right the Pathology and Bacteriology Laboratories, in the right background the South East Tower containing the four medical class-rooms and the Pent-House Theatre, on the far right the Pharmacology and Histology Laboratories.

The School of Medicine

Requirements for Admission

THE School of Medicine is co-educational, and the course leading to the degree of Doctor of Medicine is open on equal terms to both men and women. The selection of students is based upon merit and priority of date of application. Matters of race, religion, social position, and geographical distribution, are not taken into consideration in determining whether or not an applicant shall be admitted to the study of medicine.

The Committee on Admissions requires of all candidates satisfactory evidence that they have passed sufficient courses to fulfill the academic requirements for admission, and that their general qualifications are of a character fitting them for preparation to enter into the profession of medicine. No applicant is finally accepted until all of his educational records and character references have been properly verified, and until he has had a personal interview.

The School of Medicine restricts admission of candidates to those who have had at least two years of premedical work in an approved college, including courses in physics, chemistry, and biology. To satisfy this minimum requirement, the applicant must have college credits for at least a year's work in inorganic chemistry, in physics, in biology, and in organic chemistry. The courses in inorganic and organic chemistry should each consist of eight semester hours, half of which should be laboratory work. The course in physics should be of not less than eight semester hours, including two of laboratory work. The course in biology should cover a minimum of eight semester hours, half of which should be devoted to laboratory work. If a candidate presents only one year's work in biology, at least one-half of that year must have been devoted to zoology. It is urgently recommended, however, that an additional four to eight semester hours of comparative anatomy be included in the premedical qualifications. Sufficient other college credits to make up at least one-half the requirement for a baccalaureate degree must be presented. These credits may be in cultural subjects, but should include courses in English, and French or German.

Candidates for admission are required to make application upon blanks which may be obtained from the office of the Registrar at the Waltham Campus. All questions contained in the application blank must be answered in full, and the applicant must file a recent unmounted photograph. The application must be submitted accompanied by a verification fee of ten dollars. The Committee on Admissions reserves the right to refuse admission to any applicant, but if any application is refused because the quota of students has already been filled, the verification fee of ten dollars will be refunded to the applicant. Credentials and photographs which are filed by candidates for admission become the property of the college, and are kept permanently in the files.

Admission to Advanced Standing

EACH year there are a number of vacancies in the second, third, and fourth year classes available for transfers from other medical schools. Applicants for advanced standing must present evidence of the successful completion of one or more years of instruction in an approved medical school with equal entrance requirements. No credit or advanced standing may be given for partially completed school years, or for years in which an applicant was unsuccessful in passing all the courses of the curriculum. In exceptional cases, however, an applicant who has been in attendance at some other medical school during the first semester of a given year may be admitted to the second semester of the same calendar year at this School.

All applicants for advanced standing must have been entitled to an honorable dismissal from the medical school previously attended. No advanced standing may be granted on credits from schools of dentistry, or from other than approved medical schools.

A candidate admitted to advanced standing must spend at least one year in the School, completing the regular fourth or last year of study before the degree is conferred. Before admission to such fourth year, the candidate seeking admission to advanced standing must fulfill all the conditions required of candidates for admission to the fourth year who have taken the uninterrupted course in this School.

Examinations and Promotion

ADMISSION to the School is for one year only, and the Trustees reserve the right to dismiss a student at any time, or to refuse readmission or promotion to any student.

The medical course extends over a period of four years, and the students are divided into four classes. Promotion from one class to another is based upon the satisfactory completion of the work of each year. A student will not be admitted to the final examinations in any course unless his class record, attendance, and laboratory work in that subject are satisfactory, and all of these elements will be considered in the determination of his final grade. Marks are given in all courses on a percentage basis, and a grade of seventy-five per cent is required to pass the course.

A student will not be allowed the privilege of final examinations, or be given his final grades in any course, until he has satisfied all of his financial obligations to the School.

The Committees on Promotion, consisting of Administrative Officers of the School and members of the Faculty, review the work of the student at the end of the first, second, and third years of the course. It is within the province of the Committees on Promotion to decide whether a student shall be promoted to the next class, shall be permitted to take further instruction in the Summer Session and examinations for the removal of conditions in September, shall be required to repeat the year's work, or shall be denied further registration in the School by reason of unsatisfactory scholarship.

In order to be promoted to the Third-Year Class, a student must have successfully passed all of the examinations in the work of the First Year, and no student shall be eligible for promotion to the Fourth-Year Class who has failed to pass satisfactorily in all the subjects of the previous years.

Students who fail to receive passing grades in the final examinations in June may, at the discretion of the Committees on Promotion, be given an opportunity to enroll in the Summer Session for further instruction in the subjects failed, and to take examinations for the removal of their conditions during the scheduled re-examination period in September before the opening of the school year. A fee of five dollars is charged for every

such re-examination. The Committees on Promotion may permit re-examination in certain instances, and in courses that do not include laboratory work, without requiring the conditioned student to enroll for further instruction in preparation for such examinations. Students who are eligible for re-examinations must make written application at least two weeks before the examinations are scheduled, and remit the required fee of five dollars for each examination.

The mere attainment of passing grades does not insure promotion. The continuance in good standing of any student is also contingent upon his faithful adherence to the rules and regulations of the School and of affiliated institutions, as well as his observance in extra-curricular activities of a moral standard appropriate to one aspiring to the medical profession.

Any student who voluntarily withdraws from the School for proper reasons forfeits his standing, but may apply for re-admission in a subsequent year. If not too long a time has elapsed, and if changes in the rules of promotion or in the curriculum do not render such an admission impractical, his application should receive favorable consideration.

Graduation and Degrees

CANDIDATES for the degree of *Doctor of Medicine* must possess the following qualifications:

1. The candidate must be at least twenty-one years of age and of good moral character.

2. The candidate must have fulfilled all of the requirements for admission to the School of Medicine; and he must have completed four full years of not less than thirty-two weeks in each year in an approved Medical School, of which one year must be spent in the regular Fourth-Year Class of this School.

3. The candidate must have obtained a passing grade in each subject of the curriculum, and a satisfactory record of laboratory, clinical, and maternity work.

4. The candidate must have filed satisfactory means of permanent identification, including a recent photograph.

5. The candidate must have satisfied all his financial obligations to the School, including the Graduation Fee of twenty-five dollars.

6. The candidate must have satisfied the Faculty and Trustees that he has attained proficiency in Medicine, Surgery, and Obstetrics, and that he has the mental and moral qualifications essential to the successful practice of medicine.

The degree of Doctor of Medicine *cum laude* or *magna cum laude* may be given to students of highest rating in the Fourth Year Class, on recommendation of the Committee on Graduation.

Fees and Expenses

THE cost of operating a medical school is very high. It is the policy of Middlesex University to charge as low a tuition fee as is consistent with the maintenance of proper educational standards. Tuition charges and incidental expenses in many American schools, including those operated with the benefit of large endowments, are considerably higher than the fees now charged in this institution.

The requirements of medical education are such that only a limited amount of outside work can be done by a student without seriously endangering his health or scholastic standing. For this reason prospective students are urged to postpone their matriculation until they are reasonably sure of their ability to meet the expenses of at least the first year of the medical course. If a student is obliged to drop out of school before the completion of the four-year course in order to earn sufficient funds for the continuance of his education, he may apply for a leave of absence, and every effort will be made to make a place for him, should he make application for readmission within a reasonable time.

Fees are payable only by postal money order, certified check, express money order, and telegraph order. Remittances must be made by mail, and addressed to Middlesex University, Box 310, *Waltham, Massachusetts.*

The verification fee of ten dollars is payable by all new students and should accompany the filing of the application blank. This fee is not refundable except in cases where the application is rejected through no lack of qualification of the applicant, but because no vacancy exists in the class to which admission is sought. The verification fee is payable only once, and may be credited to the student's account, should he withdraw his application and then re-apply in a subsequent year.

The matriculation fee of twenty-five dollars is payable by each candidate for admission or re-admission to the School, when he is notified that his application has been acted upon favorably by the Committee on Admissions. No place will be reserved in a class until the accepted applicant has paid this matriculation fee. This fee is payable annually and is not refundable.

The tuition fee of $385 is charged for each year of instruction in the School of Medicine. This fee is payable in three installments on the dates indicated on the University Calendar. The first installment is $130, the second $130, and the third $125. The tuition fee includes all laboratory charges except breakage, damage, and loss of apparatus.

Any student whose installment of indebtedness to the School remains unpaid on the date fixed for final payment is deprived of the privileges of the School until he is reinstated. Reinstatement is obtained only by consent of the Board of Trustees, after payment of all indebtedness and a reinstatement fee of ten dollars. This charge of ten dollars is also payable, in the form of a late-registration fee, by all students who may be permitted to enroll in the School after the date set for payment of the first installment of the tuition.

The graduation fee of twenty-five dollars is payable by all successful candidates for the degree of Doctor of Medicine, upon notification by the Committee on Graduation.

An examination fee of five dollars is charged for the first re-examination in any subject failed. Any subsequent or special examination, except in the case of illness, is subject to a charge of ten dollars.

A student may obtain one transcript of his scholastic record without charge. A clerical fee of one dollar is required for all additional transcripts.

The expenses for text-books and equipment for the session 1937-1938 were as follows:

First-Year-Class . .	$125.00	Third-Year-Class . .	$65.00
Second-Year-Class .	65.00	Fourth-Year-Class .	35.00

The amount to be charged for books and equipment for the session 1938-1939 will not be announced until after the Committee on Curriculum has acted in July. Students are required to make a deposit to cover the cost of these expenses two months

before the opening of the school year, so that their equipment and books may be purchased for them and delivered during the first week of the session.

Students who do not wish to undergo the expense entailed in the purchase of a microscope may rent an instrument from the School to be used in the laboratories at a cost of five dollars a course.

Living expenses in Waltham are moderate. The School maintains no dormitories, but room and board may be obtained within walking distance of the campus for an average of ten dollars a week. A list of suitable living quarters is kept on file in the Administrative Office.

Although there are ample means of transportation between Waltham and Boston by railroad, street car, and bus, most students who commute find it convenient to travel by automobile, and ample parking facilities are available at the Waltham campus, and adjoining the Back Bay Building.

New students from a distance who are unfamiliar with the city are advised to call for information and a personal interview with the Registrar at the Back Bay Building, 415 Newbury Street, Boston, before proceeding to Waltham. The telephone listing of the School is Waltham 1681, and of the Boston office, Kenmore 9630.

Medical Attendance

A MEDICAL adviser with offices in Waltham in the vicinity of the School will be available for consultation by students. He may also be seen by appointment at the Administrative Office. A routine medical examination of each member of the entering class will be made at the beginning of the academic year.

Any illness necessitating absence from class must be reported to the medical adviser. Attendance during all class and laboratory exercises is required. Students who are absent, for any considerable time, on account of illness or for other unavoidable reason must present medical certificates or other satisfactory evidence in justification of their absence.

Library

THE Library of the School of Medicine is situated in the Library Building which forms the western part of the medical quadrangle on the Waltham campus. It contains a collection of

some 4,000 medical volumes, including a large number of standard modern text books. Substantial additions to the Library are being made annually. Current and past copies of the leading medical periodicals and clinical abstracts are on file. The Library is open during the school session, and a Librarian is in charge.

The Boston Medical Library, No. 8 The Fenway, is situated within four blocks of the Back Bay Building, and is open to both the Faculty and medical students. Founded in 1875, it contains the largest collection of medical books and periodicals to be found in New England, including over 160,000 bound volumes, over 100,000 pamphlets and reprints, and some 900 current periodicals. Students also have free access to the great resources of the Boston Public Library, which is also in the Back Bay section, and to the Waltham Public Library, not far from the medical campus.

Laboratories and Collections

The laboratories of the School of Medicine occupy four buildings on the Waltham campus. They are spacious and unusually well lighted, and are supplied with gas, water, electricity, and refrigeration. There are smaller rooms for special work, apparatus rooms, and departmental offices. Several laboratories are equipped with a large number of microscopes of the best quality, paraffin ovens, incubators, microtomes, and a full line of glassware, chemicals, and other accessories. There are available a dark room and photographic equipment with microprojection lanterns, motion picture projectors, and photomicrographic apparatus. In the anatomical museum there are assembled and displayed collections of various bones. In the pathological museum preserved specimens are available for the gross study of pathology.

Clinical Instruction

Middlesex University has affiliations for clinical teaching with a number of state, municipal, and private hospitals throughout Massachusetts. Senior students are assigned to these hospitals on a rotating schedule so as to obtain a well-rounded clinical training, in preparation for the internship to which each student is recommended immediately upon graduation from the School of Medicine.

Courses of Instruction

Schedule of Hours

THE announcement of courses consists of a condensed statement of the general plan of instruction in each department, and a description of the didactic and practical work required during the Four-Year medical course.

The curriculum in medicine covers approximately 4,000 hours of instruction, and is designed to comply with the requirements of the Approving Authority on Medical Education of the Commonwealth of Massachusetts, and the recommendations of the associated American Medical Colleges.

	No. of Hours
1. Anatomy, including Histology and Embryology	680
2. Physiology	240
3. Biochemistry	215
4. Pharmacology	150
5. Pathology, Bacteriology and Immunology	610
6. General Medicine, including Pediatrics, Neurology and Psychiatry, Dermatology and Syphilis, and Roentgenology	1,000
7. General Surgery, including Orthopedic Surgery, Urology, Ophthalmology, Otolaryngology	640
8. Obstetrics and Gynecology	225
9. Public Health and Preventive Medicine, and Medical Jurisprudence	180
Electives or Additional Clinics	100
Total	4,040

Anatomy

The courses of instruction in the Department of Anatomy constitute the ground-work for medical study and practice, and include Gross Human Anatomy, Histology, Embryology, and Neuro-anatomy. Laboratory facilities and material are available not only for the required correlated courses in this field but also for advanced work and research.

Gross Anatomy.—The study of the structure of the human body is made during the first semester of the first year. Daily lectures, recitations, and demonstrations with the aid of skeletons, bones, and charts, supplement the work in the dissecting room. Under the guidance of the professor of Anatomy and his assistants, each student completes the dissection of one-half of a human body.

Histology.—The course in microscopic anatomy deals with the elementary structure and physiological function of cells, tissues, and organs of the body. In the laboratory the student is introduced to the use of the microscope and becomes familiar with the microscopic appearance of the normal human organs and tissues.

Embryology.—The fundamental facts of human development are presented in the form of laboratory work, gross and microscopical, accompanied by lectures, illustrated by stereopticon projection, on the development of germ layers, organ systems, and the histogenesis of some tissues. Sections of embryos of domestic animals and gross specimens of human embryos are exhibited and studied. This course is closely correlated with the lectures and laboratory work in histology, and the student is taught the technique of mounting and staining slides which are studied not only under the microscope but also by the use of the microprojector.

Neuroanatomy.—This study of the structure of the central nervous system includes laboratory and microscopic work with prepared slides and the dissection of the human spinal cord and brain.

Applied Anatomy.—This is a fourth-year course consisting principally of work in the dissecting room, to include a review of gross anatomy and an application of that study to clinical subjects and surgery. When sufficient anatomical material is available, opportunity is given in this course for research in gross human anatomy by selected under-graduates or by medical graduates.

Physiology

The lecture course is supplemented by a study of text-books and periodicals, and treats the physiology of muscle, nerve, reflexes, the central nervous system, the autonomic system, the blood vas-

cular system, respiration, digestion, secretion, absorption, metabolism, the sense organs, and reproduction. The laboratory gives special emphasis to experimental technique and gas analysis.

Biochemistry

A study of the chemical substances and reactions involved in the physiological processes of the human body. The laboratory work includes a study of the chemical constituents of living matter and the chemical properties of carbohydrates, proteins, and fats, aspects of nutrition and the action of digestive enzymes, and elementary instruction in the methods of biochemical research.

Bacteriology and Public Health

Bacteriology.—This course consists of a survey of general etiology, including bacterial and parasitic causes of disease, and a study of the principles of immunity, serology, and allergy. The pathogenesis of infectious diseases is emphasized. The laboratory exercises demonstrate the procedures employed in the diagnosis of bacterial infections and are designed to familiarize the student with common pathogenic bacteria, the preparation of media, antisera, and vaccines.

Public Health.—The lectures in this course are closely correlated with the laboratory work in bacteriology and immunology, in order to emphasize those aspects of infectious diseases which relate to problems of Public Health, Hygiene, and Preventive Medicine. The communicable diseases are discussed in connection with epidemiology, administrative control, and prevention. Organized public health activities as conducted by state, municipal, and county health agencies are demonstrated through field trips.

Pathology

General and Special Pathology.—The course is designed to teach the fundamental principles of abnormal morphology, physiology, and chemistry, and consists of laboratory work, lectures, demonstrations, and experiments. The laboratory course in path-

ologic histology is based upon a selected collection of microscopic slides. Gross pathology is taught with fresh and museum specimens; by demonstrations of clinical patients showing the pathology of the living; and a study of the terminal processes of disease at the autopsy table. The physiologic and anatomical changes which occur in cell tissues, organs, and systems are explained in the lectures, and the correlation between clinical and pathological findings are discussed in conferences. The student is trained in routine methods of pathological laboratory work, besides observing demonstrations of post-mortem and post-operative materials.

Clinical Pathological Conferences

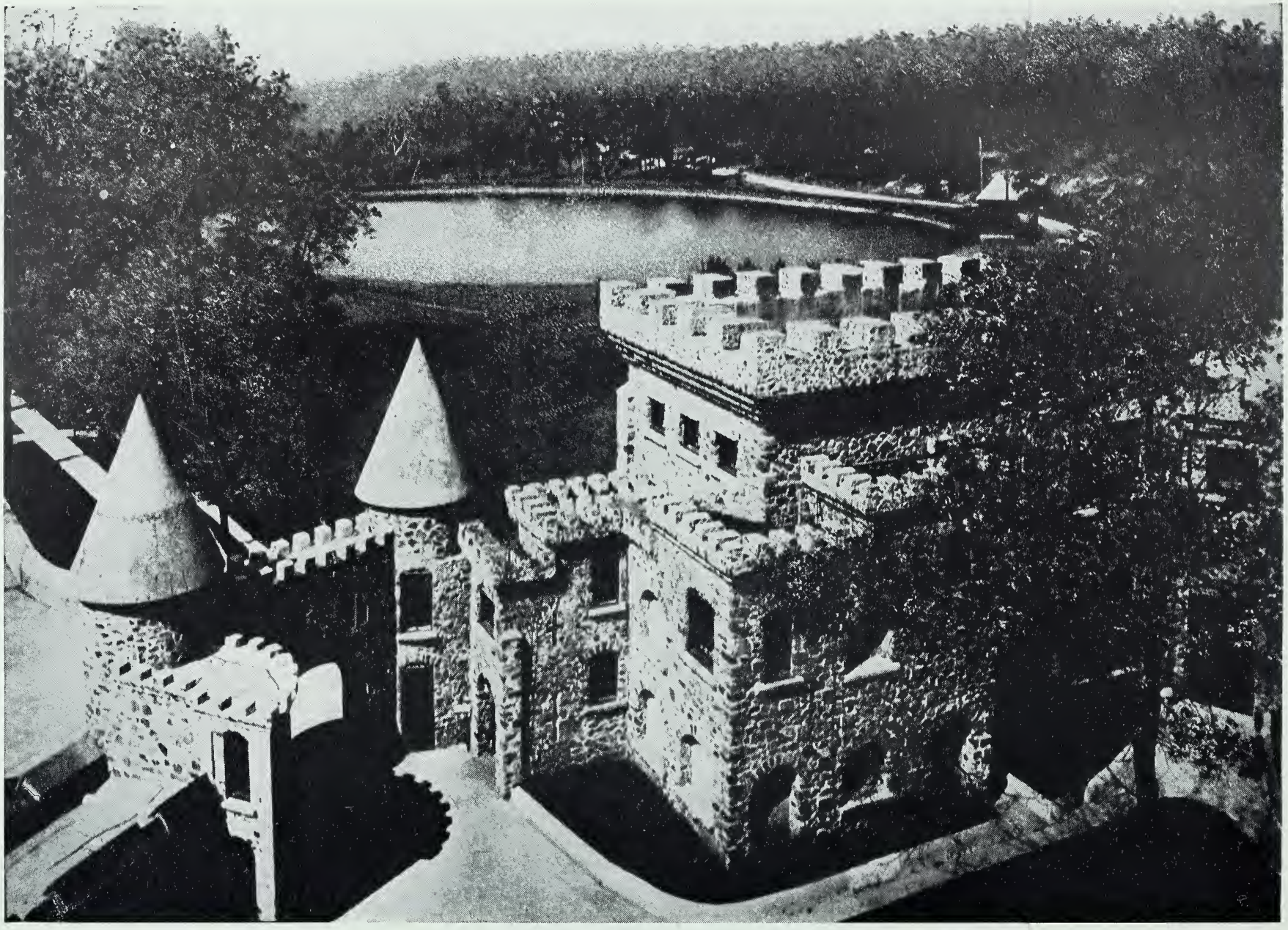
Case histories are presented and autopsies and clinical findings are compared. Specimens are demonstrated and examined from the standpoint of differential diagnosis and treatment.

Pharmacology and Therapeutics

This course includes lectures and laboratory work in the related fields of Pharmacy, Pharmacology, Materia Medica, Therapeutics, and Toxicology. The physical and chemical properties and physiological actions of the more important drugs are discussed and demonstrated by actual experimentation in the laboratory. Prescription writing is studied in the classroom, and the compounding of standard pharmaceutical preparations in the laboratory. The effect of poisons, and their identification in the stomach contents, tissues, and foods are discussed.

Medical Jurisprudence

This course deals with the relationship of medicine and the law, particularly stressing the legal principles which pertain to the practice of medicine, and the legal duties and obligations of a physician. In a series of thirty-two lectures the following subjects are discussed: Medical Licensure and Causes of Revocation, Expert Testimony and the Laws of Evidence, the Contractual Relationship between Physician and Patient, the Legal Obligations of a Physician, Civil and Criminal Malpractice, False Representations, Insanity as a Defense and as a Disability, Commitment, Crimes with a Medical Aspect, Industrial Accidents and Actions of Tort, Medical Legal Aspects of Birth and Death.



The Premedical Building



The Physiology Laboratory

Medicine

Instruction in this department extends over three years of the medical course, and is designed to cover the principles of the practice of medicine and of clinical medicine. It begins in the second year with a discussion of symptomatology and physical diagnosis so presented as to acquaint the student with history taking, physical examination, and the interpretation of the clinical manifestations of disease.

During the third and fourth years of the course emphasis is shifted to the practical methods of clinical diagnosis in hospital clinics and dispensaries, where the student, through individual instruction, is taught to apply in practical work the knowledge gained from the classroom and text-books. Selected cases are demonstrated in the hospital amphitheatre. By the sub-division of the Fourth-Year Class into small sections, individual instruction in the various departments of medicine is facilitated, and direct contact with patients made possible.

Pediatrics

Instruction begins in the third year with a course of lectures, supplemented in the fourth year with clinical instruction and the amphitheatre presentation of cases. The course covers principles of infant feeding and the physiology of nutrition, the normal growth and development of children, as well as the diagnosis and treatment of the more common diseases of children, including those of a contagious nature. The preventive phase of pediatrics is emphasized.

Roentgenology

This course begins with a consideration of the fundamental principles of physics as applied to radiology and proceeds to a study of the use of the X-ray in diagnosis and treatment. Practical instruction is given in the interpretation of findings on fluoroscopic screen and films. The appearance of normal structures and typical pathologic conditions are demonstrated in the classroom and by clinical observation in the X-ray Department of the hospital.

Surgery

Instruction in this department begins in the second year with a systematic course dealing with the principles of surgery. In the third and fourth years consideration is given to diseases of the bones and joints, tumors, hernia, and anesthesia. Lectures and assigned study are supplemented by clinical and amphitheatre demonstrations covering asepsis, antisepsis, sterilization of the operating room materials, pre-operative treatment of patients, surgery of wounds, treatment of fractures and dislocations, and the usual surgical operations of the head, neck, thorax and abdomen. Operative surgery on the cadaver, included in the course in applied anatomy, is correlated with instruction in this department.

Students have an opportunity of assisting in private operating rooms, and of receiving practical instruction in minor surgery in outpatient clinics.

Orthopedics

The effects of infection, traumatism, habitual overstrain, and functional insufficiency upon joint structures are studied in this course, emphasis being placed upon pathology and upon the physical examination of normal and pathological joints. Treatment of diseases and deformities of the spine and extremities is discussed, and the application of casts, splints, and other methods of cure demonstrated.

The didactic lectures are supplemented by the clinical study of the more common orthopedic subjects, including poliomyelitis, arthritis, tuberculosis of the joints, osteomyelitis, and congenital deformities.

Obstetrics

Instruction in this department is given during the third and fourth years, and includes lectures, recitations, manikin exercises, laboratory courses, and practical work and observation in the amphitheatre, delivery room, and outpatient department.

During the fourth year, each student is assigned to this department for section work, while in attendance at the prenatal clinic, and on call for deliveries in the hospital and on outpatient service.

Accommodations are available in the hospital dormitory for

students on obsterical service, and each student is required to participate in deliveries and post-natal care.

Gynecology

Instruction is given by didactic lectures in the third year, and by clinical observation and demonstration in the fourth in the general field of gynecological diseases, and the student is familiarized with the cause, diagnosis, and treatment of the more significant pathological conditions within the pelvis.

Dermatology and Syphilology

This course covers the etiology, symptoms, histopathology, diagnosis, and treatment of diseases of the skin, and includes a discussion of the methods of radium and roentgenray therapy. The clinical and laboratory procedures used in the treatment and diagnosis of syphilis are discussed and demonstrated.

Laboratory Diagnosis

This course deals with the significance and technique of the practical laboratory procedures which pertain to clinical diagnosis. It consists of lectures, demonstrations, and laboratory instruction in the examination of the blood, urine, sputum, stomach contents, feces, effusions, and spinal fluid.

Neurology and Psychiatry

The course in Neurology begins with a brief review of Neuro-Anatomy, and proceeds to a study of nervous diseases and neurological diagnosis with special reference to the relations of neuropathology and clinical neurology.

In Psychiatry the lectures cover the nature, cause, diagnosis, prognosis, and treatment of the various forms of mental disease. The commitment of the insane is discussed from the point of view of the medical practitioner. Clinical discussion, demonstration, and examination of the various types of mental and nervous disorders is conducted with the co-operation of the members of the staffs of various state hospitals for the insane.

Ophthalmology

Starting with lectures in the third year, instruction in this course continues in the fourth-year clinics, with the class divided into teaching sections. Each student receives individual instruction in the use of the ophthalmoscope. External diseases of the eye and anomalies of the ocular muscles are covered in a practical way. The elements of the fitting of glasses are demonstrated and discussed.

Otology and Laryngology

This course is designed to convey by lectures in the third year, and by clinical observation and demonstrations in the fourth, a knowledge of the principal diseases of ear, nose, and throat, and includes didactic and hospital instruction in the methods of examination, diagnosis, and treatment. The student learns the use of the otoscope, the various methods of testing the hearing, and is given an opportunity to witness the more important operative procedures. The student's accomplishment of assigned textbook study is tested by classroom recitations and written quizzes.

Medical Ethics and History

The purpose of this course is to outline the progress of medical science from the days of the alchemist and the midwife to modern times, emphasizing the biographies of those who have most significantly contributed to the rise of modern medical methods. Instruction is parallelled by assigned text-book study. The last few lectures deal with the ethical standards of the profession of medicine, and with the specific problems in ethics that arise in the practice of medicine.

Announcement will be made in a later edition of the catalogue of faculty members and courses of instruction in the following departments: Industrial Medicine, Medical Economics, Physiological Optics, and Physical Therapy.

Degrees

At Commencement Exercises, held at the Hamblin L. Hovey Institute, Waltham, on the fourteenth day of June 1937, the degree of Doctor of Medicine was conferred on the following candidates:

Class of 1937

Esther Adelman Malden, Mass.
Middlesex College

John A. Arminio Ossining, N. Y.
B.S., William and Mary College

Donald Bruce Bannerman East Bridgewater, Mass.
A.B., Union College

Charles Lewis Baver Orwigsburg, Pa.
B.S., Franklin and Marshall College

Myer Herbert Bloomenthal Syracuse, N. Y.
A.B., Syracuse University

Michael Leonard Bonaccorso Boston, Mass.
Ph.B., Boston College

Frederick Simpson Brown Boston, Mass.
S.B., S.M., Massachusetts Institute of Technology

Donald Edgerly Campbell Edwards, N. Y.
B.S., St. Lawrence University

Anthony Thomas Capello West Albany, N. Y.
B.S., St. Lawrence University

Benjamin Cherkas Brooklyn, N. Y.
Long Island University, Dalhousie University

Edward John Farley Brockton, Mass.
A.B., Georgetown University

Myer Feingold Chelsea, Mass.
Middlesex College

Sydney Friedman, *Cum Laude* New York, N. Y.
B.S., University of Louisville

Samuel Joseph Galbo Hornell, N. Y.
B.S., St. Bonaventure College

Abraham Gold Chelsea, Mass.
Middlesex College

George Goldberg Brookline, Mass.
Boston University

Harold Sumner Goldman Revere, Mass.
Middlesex College

George Samuel Gordon Lynn, Mass.
Middlesex College

Max Benjamin Green Malden, Mass.
Middlesex College

Charles Lew Hanson Boston, Mass.
B.S., Boston University

John Valentine Hartman Temple, Pa.
B.S., Franklin and Marshall College

A. Albert Hittel Mattapan, Mass.
Middlesex College

Harry Jack Hyfer, *Cum Laude* Chelsea, Mass.
Middlesex College

Lewis Sol Karp, *Cum Laude* Mechanicville, N. Y.
Union College

Joseph Daniel Karras Brookline, Mass.
Northeastern University, Middlesex College

Kasper Kaufman Roxbury, Mass.
Middlesex College

Morris Kelman Chelsea, Mass.
Middlesex College

Harold Lampner Hyde Park, Mass.
Middlesex College

Sylvester Mead Lent Greenwich, Conn.
B.S., Yale College

Albert Levine Mattapan, Mass.
B.S., Boston University

Charles Henry Mann, Jr. Bay City, Mich.
B.A., Alma College

Americo Mark Massaro Rochester, N. Y.
B.S., Alfred University

David Isaac Meline Roxbury, Mass.
Middlesex College

Harry Theodore Mesh Bronx, N. Y.
Duke University

Forrest Milden Haverhill, Mass.
Middlesex College

Charles Irving Nichols Medford, Mass.
University of North Carolina
Middlesex College

Irving Herman Park Dorchester, Mass.
Middlesex College

James Joseph Pash Lawrence, Mass.
Massachusetts College of Pharmacy
Middlesex College

David Myron Paul Everett, Mass.
Middlesex College

Americo Picariello East Boston, Mass.
Middlesex College

Alpine Louis Ricci Malden, Mass.
Middlesex College

Theodore Rosen Boston, Mass.
Middlesex College

Samuel Rosenthal Allston, Mass.
Middlesex College

Irving Saffran Mattapan, Mass.
Middlesex College

Joseph Scaringi Cambridge, Mass.
Middlesex College, New York University

Sheron A. A. Schmoyer Trexlertown, Pa.
B.S., Muhlenberg College

Irving Irwin Selsby Roxbury, Mass.
Middlesex College

Eli Shapiro Mattapan, Mass.
Middlesex College

Jack Edward Sher Brookline, Mass.
Middlesex College

Samuel Bernard Shuman Roxbury, Mass.
Middlesex College

Anthony Ralph Staffier Medford, Mass.
Middlesex College

Peter Roger Valicenti East Weymouth, Mass.
B.A., Bates College

Bruno Velona East Boston, Mass.
Middlesex College

Samuel Victor Mattapan, Mass.
Middlesex College

Harold V. M. Waite Northampton, Mass.
B.S., Massachusetts State College

Isidore Werby Dorchester, Mass.
A.B., Harvard College

*Out of Course**

J. Amerena Everett, Mass.
Northeastern University

John J. Anastasi Philadelphia, Pa.
Hahnemann College

Benjamin Blesoff Malden, Mass.
Middlesex College

EDWARD HENRY BUFFUM Manchester, N. H.
B.S., University of New Hampshire

G. AMEDEO CAPODILUPO Boston, Mass.
Middlesex College

ANDREW CATINO Revere, Mass.
Middlesex College

JULIUS WILLIAM COHEN Lynn, Mass.
Middlesex College

PETER PAUL COTTONE Scranton, Pa.
St. Thomas College

AMADEO JOSEPH DEFEO Everett, Mass.
Middlesex College

JOSEPH FRISCH Lynn, Mass.
Middlesex College

JACK GINSBERG No. Weymouth, Mass.
Middlesex College

MORRIS GOLDSTEIN Cambridge, Mass.
Middlesex College

MATTHEW J. LAPPIN Boston, Mass.
Middlesex College

MILTON LEVINE Revere, Mass.
Middlesex College

DANIEL D. LICATA Revere, Mass.
Middlesex College

U. DAVID LIMAURO Lynn, Mass.
University of Vermont

VINCENT MANISCALCO Boston, Mass.
Middlesex College

ISRAEL MARCUS Brookline, Mass.
Middlesex College

DOMENIC MATTHEW PESCATORE Philadelphia, Pa.
Villanova College

BERT HENRY REED Brookline, N. Y.
St. Francis College

JAMES NORTON SHAMEY Salem, Mass.
Middlesex College

MATTEO SALVATORE A. VENTIMIGLIA . . . Lawrence, Mass.
Royal University of Catania

* These students completed at least one year of hospital internship before graduation, in accordance with the requirements in effect during their senior year. The internship requirement has now been discontinued.

Students 1937-1938

Candidates for the Degree of Doctor of Medicine

Fourth-Year Class

Michael George Abbott Manchester, N. Y.
Alfred University

Vincent Anthony Andoloro Everett, Mass.
B.A., Boston College

Matteo Caradonna Everett, Mass.
Middlesex College

Sumner Carp Dorchester, Mass.
Middlesex College

Dominic Cavalieri East Boston, Mass.
Middlesex College

Harry Jack Cohen Springfield, Mass.
Middlesex College

William Vito Colangelo Long Island City, N. Y.
B.S., Villanova College

Arthur Thomas De Angelo Medford, Mass.
B.S., Tufts College

Frank Joseph DeCesare Lawrence, Mass.
Middlesex College

Peter Leo Demeter North Grosvenordale, Ct.
Clark University
Middlesex College

Max Dosik Brooklyn, N. Y.
Ph.G. Brooklyn College of Pharmacy
Brooklyn College

Patsy Charles Ferrera Boston, Mass.
Middlesex College

David Glickman Syracuse, N. Y.
A.B., Syracuse University

Max Goldstein Washington, D. C.
George Washington University

Morris Gorfine Somerville, Mass.
Providence College
Middlesex College

Melvin Lawrence Horne Roxbury, Mass.
Middlesex College

MICHAEL GEORGE IOUP Altoona, Pa.
B.S., University of Pittsburgh

KINGSLAND EDWARD JOHNSON Fishkill, N. Y.
University of Vermont

ABRAHAM EUGENE KATEMAN New York, N. Y.
Long Island University

JOHN WILLIAM KOLOZETSKI Lynn, Mass.
Boston University

YOU HOW LEE Washington, D. C.
George Washington University

DAVID LEVY Long Island, N. Y.
Middlesex College

CARMELO CHARLES MARINO Boston, Mass.
Middlesex College

JOSEPH ORATIO MIGLIORE Wakefield, Mass.
Middlesex College

NATHANIEL BERGER MILLER Riverside, N. J.
A.B., Lafayette College

HARRY NEEDELMAN Bronx, N. Y.
Long Island College, Dalhousie University

JOHN PHILIP NOONAN Brockton, Mass.
B.A., Georgetown University

BANKIM B. RAY CHOWDHURY Bengal, India
M.B.H. Calcutta Homeopathic Medical College

LOUISE FRANCES REDA Chicago, Ill.
Lewis Institute

VINCENT MICHAEL SARLO Brooklyn, N. Y.
B.S., Franklin and Marshall College

NATHAN KENNETH SHAND Waterbury, Conn.
B.S., Dalhousie University

LOUIS GERARD TORRIERI Yonkers, N. Y.
B.S., Manhattan College

SEBASTIAN JOHN VILLANI New York, N. Y.
B.S., Manhattan College

WILLIAM THADDEUS WALKER Greer, S. C.
B.S., Furman University

EDWARD ABRAHAM WINSTEN Everett, Mass.
Middlesex College

MORRIS LOUIS ZUNDER Roxbury, Mass.
Middlesex College

Third-Year Class

Sidney Martin Abrams Bronx, N. Y.
B.S., Long Island University

Daniel Atoman Lynn, Mass.
University of New Hampshire
Middlesex College

Joseph Blank Jamaica, N. Y.
B.S., Moravian College

Russell Francis Brodman Philadelphia, Pa.
Ph.G., Philadelphia College of Pharmacy
B.A., Temple University

Eugene Francis Brooks New York, N. Y.
Middlesex College

Eugene Francis Byrne Hyde Park, Mass.
A.B., Boston College

David H. Cohen Cambridge, Mass.
A.B., Boston College

Charles F. Conway Milville, Mass.
Ph.B., Providence College

Alfred Lott Cornwell Bridgeton, N. J.
B.S., Dickinson College

Alexander Joseph Dalbec Oxford, Mass.
B.A., Holy Cross College

Adrian Delerzon Newton, Mass.
Ph.G., Massachusetts College of Pharmacy
Middlesex College

John Salvatore DeSimone Avonmore, Pa.
B.S., University of Pittsburgh

Robert Vincent DiPasca New York, N. Y.
A.B., Fordham University

James Francis Donnelly New Haven, Conn.
B.S., Tufts College

John Donovan Oswego, N. Y.
Syracuse University

Aaron Arthur Dubrow Dorchester, Mass.
Middlesex College

Victor Ellis Dorchester, Mass.
Middlesex College

Allen William Enos Adams, N. Y.
B.S., Cornell University

MURRAY IRWIN FEINBERG Mattapan, Mass.
Middlesex College

STANLEY HAROLD FRANKLIN Dorchester, Mass.
Middlesex College

MORTON MAURICE ALBERT GOLDBERG . . . New York, N. Y.
Long Island University
Dalhousie University

HERBERT GOLDMAN Lynn, Mass.
B.S., Boston University

REUBEN GREENBERG Bronx, N. Y.
Long Island University
University of Arkansas

FRANCIS PAUL GRZEDZINSKI Plains, Pa.
Purdue University

ISIDORE JOSEPH GUCCIONE Corona, N. Y.
B.S., Villanova College

CHARLES WILFRED HAUCK Girard, Pa.
B.S., University of Pittsburgh

LEON GILBERT JACOBS Bayonne, N. J.
B.S., Georgetown University

JOSEPH KALNA Maltby, Pa.
B.S., Villanova College

GEORGE STAFFORD KERR Baton Rouge, La.
B.S., Lousiana State University

HERBERT KORENBLITT Somerville, Mass.
Middlesex College

LOUIS LEVINE Brooklyn, N. Y.
Long Island University

ERIC CHARLES LOTH Elizabeth, N. J.
B.S., Bowdoin College

JOHN JOSEPH LOUGHLEN Olean, N. Y.
A.B., Cornell University

RALPH MAXWELL MACMILLAN Brooklyn, N. Y.
B.S., Long Island University

DONALD FRANCIS MCENROE Whitman, Mass.
Harvard University
Middlesex College

BERNARD FRANCIS MCKERNAN Yonkers, N. Y.
A.B., Fordham University

PETER PAUL MCKINNIS Lawrence, Mass.
Northeastern University
Middlesex College

Santo Vincent Macchia Medford, Mass.
Middlesex College

Alfonso Charles Mandrachia Everett, Mass.
B.S., Tufts College

Edward John Matejewicz Newark, N. J.
B.A., New York University

Bernard Myer Millman Mattapan, Mass.
Middlesex College

Milton Sonniel Monyek Elizabeth, N. J.
Middlesex College

Frank Donald Napolitani New York, N. Y.
B.A., University of Alabama

Thomas Francis O'Brien Mineville, N. Y.
B.A., Holy Cross College

Louis Gerard Pellettieri Yonkers, N. Y.
B.S., Manhattan College

Myer Mac Perlstein Brooklyn, N. Y.
B.S., Columbia University

Edmund Stanley Piszczek Plymouth, Pa.
Villanova College

Francis Lyons Plouff Mishawaka, Ind.
B.S., Purdue University

Daniel Anthony Porreca Philadelphia, Pa.
B.S., Villanova College

Harry Alvin Press New York, N. Y.
A.B., College of City of New York

Thomas Rinaldi Schenectady, N. Y.
B.S., Fordham University

Peter Rosanelli Brooklyn, N. Y.
B.A., Colgate University

Paul Rothenberg Brooklyn, N. Y.
New York University
Dalhousie University

Arthur Aloysius Ryan Jersey City, N. J.
B.S., Fordham University

William G. D. Scales Dunellen, N. J.
B.S., Johnson C. Smith University

Robert Schwartz Dorchester, Mass.
Middlesex College

Guy Francis Sciacca Boston, Mass.
Middlesex College

Theodore Shane Mattapan, Mass.
Middlesex College

Daniel Joseph Shempa Hyde Park, Mass.
Middlesex College

Leonard Victor Short Tewksbury, Mass.
B.S., Tufts College

Bernard Sills Brooklyn, N. Y.
A.B., Dartmouth College

William E. Sorrell Bronx, N. Y.
B.S., New York University
M.A., Columbia University

Pasquale Rocco Tedeschi Newton, Mass.
Tufts College

Anthony James Terranova Fulton, N. Y.
Syracuse University

Russell Francis Thompson Abington, Mass.
Middlesex College

Franklyn Edward Verdon Millbury, N. J.
A.B., Catholic University

Max Jack Wasserman Sheboygan, Wis.
B.A., University of Wisconsin

Abraham David Weintraub New York, N. Y.
San Bernardino Junior College
Riverside Junior College
University of Redlands

Leo U. Zambon South Ryegate, Vt.
University of Vermont

Second-Year Class

Phyllis Madine Abbott Auburn, Me.
A.B., Randolph-Macon Woman's College

Jose Oscar Afanador Puerto Rico
University of Puerto Rico,
St. John's University

Louis James Badia New Rochelle, N. Y.
Ph.G., B.S., Fordham University

Raymond Gerard Cannon Bellerose, N. Y.
Elon College

Edward Milan Cardillo Everett, Mass.
A.B., Boston College

Jack Stanley Carp Manchester, N. H.
Massachusetts College of Pharmacy
Middlesex College

John Quinn Clark Providence, R. I.
Ph.B., Providence College

Simon Cohen Mattapan, Mass.
Middlesex College

Edward Downer Croissant West Medford, Mass.
Tufts College

Edmund Vincent Dente Somerville, Mass.
Middlesex College

Robert Edward Donovan New York, N. Y.
Notre Dame College, Columbia University
Fordham University

Theodore Gilbert Echlov Mattapan, Mass.
A.B., Harvard University

Max Ettenberg Cambridge, Mass.
Middlesex College

Samuel Wallace Fleming Jamesville, N. C.
University of North Carolina

Abraham Freedman Boston, Mass.
Middlesex College

Noble R. Frisby Washington, D. C.
B.S., Howard University

Robert Charles Gaudreau Indian Orchard, Me.
A.B., Assumption College

William M. Gianquinto Brooklyn, N. Y.
A.B., Ohio University

Wedo Giovaniello Brockton, Mass.
B.S., University of Michigan

William Thomas Harrington Everett, Mass.
Ph.B., Boston College

Wendell Burke Harris Brockton, Mass.
Middlesex College
Wilberforce University

Lawrence Seymore Hirsch Buffalo, N. Y.
University of Buffalo

Emil Lehr Montclair, N. J.
Long Island University

Mashe Uda Labe Lightman Lowell, Mass.
A.B., Bates College

DANIEL G. LIPMAN Brooklyn, N. Y.
Long Island University
Dalhousie University

SIMON MORRIS LIPTON Miami, Fla.
B.S., University of Florida

JOHN ANTHONY MASTROMARINO Revere, Mass.
Middlesex College

JOHN GEORGE MORIN Newark, N. J.
B.S., Villanova College

FLOYD A. NASSIF Cedar Rapids, Iowa
B.S., State University of Iowa

CHESTER LEONARD NAYFIELD Mt. Carmel, Pa.
B.S., Bucknell University

GEORGE EMIL PAGLIARULO Boston, Mass.
Middlesex College

GEORGE POVEY PARTON, JR. Chevychase, D. C.
B.S., Catholic University

CARMINE PAULANTONIO New York, N. Y.
B.S., Fordham University

SAVERIO PICCERI Boston, Mass.
Middlesex College

LAWRENCE KEMPNER PIOUS New Haven, Conn.
B.A., Wesleyan College

ABRAHAM PODRADCHIK Chelsea, Mass.
Middlesex College

EVERETT SIMON RADOVSKY Fall River, Mass.
B.S., Rhode Island State College

LOUIS S. RICCARDI Brooklyn, N. Y.
A.B., University of North Carolina

FRANK CENTURIO ROMANO East Greenwich, R. I.
B.S., Villanova College

RUDOLPH SALVATORE ROMANO East Greenwich, R. I.
B.S., Villanova College

HENRI P. J. SAINT HILLE Albany, N. Y.
B.S., Wilberforce University

VINCENT SCHETTINI Newburgh, N. Y.
A.B., Syracuse University

WALTER ROBERT SCHUR Webster, Mass.
Valparaiso University

JULIAN ROBERT SEIDE New York City
New York University
Middlesex College

NATHAN H. SKORNIK Brooklyn, N. Y.
B.S., New York University

NATHAN SMITH Waltham, Mass.
University of New Hampshire

WARREN GRANT SNYDER Wilmington, Del.
B.S., Baldwin-Wallace College

LOUIS STRAUSS Roxbury, Mass.
Ph.G., Massachusetts College of Pharmacy
B.S., Middlesex College

ISAAC JOSEPH TENDER Paulsboro, N. J.
B.S., Gettysburg College

KENNETH HARRISON WILLARD Framingham, Mass.
B.S., Tufts College

ISIDORE JACQUES YETWIN Elizabeth, N. J.
B.S., Rutger's University
S.M., University of Chicago

RICHARD FRANCIS YORK Richmond Hill, N. Y.
Niagara University

First-Year Class

ELI ABRAMS Roxbury, Mass.
B.S., Boston University

FRANK MICHAEL ALFANO Newark, N. J.
B.S., Villanova College

SAMUEL LOUIS ASPIS New York, N. Y.
B.S., College of the City of New York

JOHN JAMES BARRY Medford, Mass.
B.A., Holy Cross College

MILTON BERGER New York, N. Y.
B.A., University of Michigan

JOSEPH BERMAN Edgemere, N. Y.
Long Island University

BRUNO JOSEPH BEVIVINO Brooklyn, N. Y.
A.B., Tufts College

LOUIS LAWRENCE BLUESTEIN Lynn., Mass.
Long Island University

EDWARD CHARLES CARR Waturbury, Conn.
B.S., Fordham University

KENNETH COHEN Lynn, Mass.
Massachusetts State College
Middlesex College

NATHAN WILLIAM COHEN Roxbury, Mass.
B.A., Brown University

DANTE PAUL COLITTI New York, N. Y.
B.S., Manhattan College

SAMUEL PHILLIP CRUCILLA Jamestown, N. Y.
St. Bonaventure College

DAVID WOOD DALE Seattle, Wash.
University of Washington
Seattle College

STANLEY FRANK DEBSKI Brooklyn, N. Y.
B.S., St. Bonaventure College

JOHN PERSHING DECICCO Worcester, Mass.
Middlesex College

FRANCIS THOMAS DESTEFANO Roxbury, Mass.
Boston College
St. Anselm's College

CHARLES DI GIACOMO South Boston, Mass.
Tufts College

GUY ALFRED DISTASIO Revere, Mass.
Ph.G., Massachusetts College of Pharmacy
B.S., Middlesex College

WILLIAM DORFMAN Hoboken, N. J.
A.B., Duke University

NICHOLAS JOSEPH ESPOSITO Troy, N. Y.
A.B., Union College

HARRY FINKELMAN Portland, Me.
A.B., Brown University

HAROLD FRIEDMAN Freeport, N. Y.
Columbia University
Ph.G., Fordham University

GIOBERT GIANGREGORIO E. Boston, Mass.
B.S., Tufts College
M.Ed., Boston University

SIDNEY GOLDMAN Roxbury, Mass.
Middlesex College

STANLEY GOTTLIEB Brooklyn, N. Y.
B.S., Long Island University

GAETANO GUY GRANDE E. Boston, Mass.
Middlesex College

GERALD FRANCIS GRAY Hornell, N. Y.
B.S., St. Bonaventure College

Sidney Kanowitz Chester, Mass.
A.B., Clark University

Abraham Kaufman Brooklyn, N. Y.
B.S., Long Island University

Edward Joseph Kiember Holyoke, Mass.
Villanova College
Temple University

Bernard Sidney Kramer Revere, Mass.
Ph.G., Massachusetts College of Pharmacy
B.S., Middlesex College

Martin Eugene Lasoff Brooklyn, N. Y.
B.S., University of Arkansas

Joseph John Lavanga Boston, Mass.
Temple University
St. Joseph's College

Alfred Louis Lentini Roslindale, Mass.
B.A., Boston College

Morris Franklyn Levy Hoboken, N. J.
B.S., Wayne University

Sidney Lewis Troy, N. Y.
Union College

John William Lingos Boston, Mass.
A.B., Boston College

Abraham D'Arcy Lockshin Youngstown, O.
B.S., M.A., Ohio State University

Theodore Roosevelt Mack Mooresville, N. C.
B.S., Davidson College

Felix Vito Marino Brooklyn, N. Y.
B.S., Long Island University

George Marmer Lynn, Mass.
B.A., Tufts College

Anthony Lawrence Mauceri Glendale, N. Y.
University of Kentucky
Long Island University

Thomas Arthur McCullough Watervliet, N. Y.
A.B., Union College

James Leland Menges Everett, Mass.
Tufts College
Middlesex College

Abraham Irving Michaelson Revere, Mass.
B.S., Massachusetts State College

RALPH ELI OSTROFSKY Mattapan, Mass.
B.A., University of West Virginia

VINCENT JOSEPH PANVINI New York, N. Y.
B.S., Fordham University

SYDNEY SANFORD PARKER Dorchester, Mass.
B.S., Rhode Island State College

NATALE ROBERT PETRELL Somerville, Mass.
B.S., Tufts College

SAUL HARRY PHILLIPS Roxbury, Mass.
Middlesex College

LESTER IRVING RALPH Brooklyn, N. Y.
B.S., Long Island University

DAVID RAPPAPORT Bridgeport, Conn.
A.B., University of Alabama

SIDNEY GEORGE RHEUBAN Youngstown, O.
B.A., Ohio University

JACK ROWLEN RINGER Cambridge, O.
B.A., Denison University
M.A., Ohio State University

ESTHER BESSIE ROSENBAUM Worcester, Mass.
Middlesex College

MAURICE SAMUEL ROSENBERG Roxbury, Mass.
Middlesex College

WILLIAM ANGELO SACCONE Revere, Mass.
B.S., Tufts College

GILBERT RHOADY SCALONE Corona, N. Y.
College of the City of New York
Long Island University

FRANK JOHN SCHAFFER New York, N. Y.
B.S., Villanova College

JACOB JOSEPH SEBRENIK Brooklyn, N. Y.
Long Island University
University of Cincinnati

FRANKLIN IRVING SHUMAN Mattapan, Mass.
Middlesex College

CASIMIR CARL SKRZYSZEWSKI Pittsburgh, Pa.
B.S., Duquesne University

ALECK SMITH Somerville, Mass.
B.S., Massachusetts State College

BENJAMIN SPELFOGEL Mattapan, Mass.
B.S., Boston University
A.M., Harvard University

Sigmund John Szydlowski Wakefield, Mass.
B.S., Tufts College

Harold Samuel Tannenbaum Jamaica Plain, Mass.
B.S., Massachusetts State College

Vincent Totin Perth Amboy, N. J.
B.A., Villanova College

Richard Lionel Turcotte Lowell, Mass.
A.B., Harvard University

Joseph August Valatka Worcester, Mass.
Clark University

Thomas Francis Whalen, Jr. New York, N. Y.
B.S., Fordham University

Herbert Killian Wittig Buffalo, N. Y.
University of Buffalo

Francis Joseph Wixted Danbury, Conn.
Villanova College

Sidney Leo Yellowitz Dorchester, Mass.
B.A. Depauw University

Ralph Pasquale Zolla Revere, Mass.
B.S., American International College

Distribution by Colleges

Since some students attended more than one college in completing their preparation for admission to medical school, the number in this list will be greater than the total enrollment.

Alabama, University of	2
Alfred University	1
American International College	1
Arkansas, University of	2
Assumption College	1
Baldwin-Wallace College	1
Bates College	1
Boston College	8
Boston University	10
Bowdoin College	1
Brooklyn College	2
Brooklyn College of Pharmacy	1
Brown University	2
Bucknell University	1
Buffalo, University of	2
Catholic University	2
Chicago, University of	1
Cincinnati, University of	1
Clark University	3
Colgate University	1
College of the City of New York	3
Columbia University	4
Cornell University	2
Dalhousie University	1
Dartmouth College	1
Davidson College	1
Denison University	1
Depauw University	1
Dickinson College	1
Duke University	1
Duquesne University	1
Elon College	1
Florida, University of	1
Fordham University	11
Franklin and Marshall College	1

Furman University	1
Georgetown University	3
George Washington University	2
Gettysburg College	1
Harvard University	5
Holy Cross College	3
Howard University	1
Hunter College	1
Johnson S. Smith University	1
Kentucky, University of	1
Lafayette College	1
LaSalle College	1
Lehigh University	1
Lewis Institute	1
Long Island University	20
Louisiana State University	1
Manhattan College	4
Maryland, University of	1
Massachusetts College of Pharmacy	5
Massachusetts State College	4
Michigan, University of	4
Middlesex College	55
Moravian College	1
Mount St. Mary's College	1
New Hampshire, University of	2
New York University	14
Niagara University	1
North Carolina, University of	2
Northeastern University	2
Notre Dame, University of	1
Ohio State College	3
Ohio University	1
Philadelphia College of Pharmacy	1
Pittsburgh, University of	4
Providence College	3
Puerto Rico, University of	1
Purdue University	2
Randolph-Macon Woman's College	1
Redlands, University of	1
Rhode Island State College	3
Riverside Junior College	1

Rutgers College	2
St. Anselm's College	3
St. Bonaventure College	3
St. John's University	1
St. Joseph's University	1
St. Louis University	1
San Bernardino Junior College	1
Seattle College	1
State University of Iowa	1
Syracuse University	3
Temple University	4
Tufts College	15
Tulane University	1
Union College	3
Valparaiso University	1
Vermont, University of	2
Villanova College	14
Virginia, University of	1
Washington State College	1
Washington, University of	1
Wayne University	1
Wesleyan University	1
West Virginia, University of	1
Wilberforce University	3
Wisconsin, University of	1

Geographical Distribution of Students

Connecticut	7
Delaware	1
Florida	1
Illinois	1
Indiana	1
Iowa	1
Louisiana	1
Maine	5
Massachusetts	96
New Hampshire	1
New Jersey	17

New York	72
North Carolina	2
Ohio	3
Pennsylvania	10
Rhode Island	3
South Carolina	1
Vermont	1
Washington	1
Wisconsin	1
District of Columbia	4
Puerto Rico	1
India	1

Summary

Candidates for the Degree of Doctor of Medicine

Senior Class	36
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	232

The College of Arts and Sciences

Requirements For Admission

ALL candidates for admission to the College of Arts and Sciences must present satisfactory evidence of having attained the educational qualifications required for graduation from a public high school, or from an approved preparatory school, or of the successful completion of at least 15 units of high school work. A unit represents one year's work in one subject at high school, or five hours of instruction a week during the school year.

It is recommended that a candidate for admission to the College of Arts and Sciences complete a high school course including four units of English, two units of Algebra, one unit of Geometry, two units of French or German, two units of History, one unit each of Latin, Physics, Chemistry, Biology. These high school subjects are recommended rather than required, and students who have been graduated with an equivalent number of units differently distributed will be admitted if their general selection of subjects and their scholastic standing is satisfactory. For students who intend to take the journalism course, an adequate knowledge of typewriting is recommended.

Applicants who have attended one or more years of instruction in a college of approved academic grade may be admitted to advanced standing and receive credit for courses completed. In all cases, however, a candidate for a degree must complete his final year of college work at Middlesex University.

Fees and Expenses

The tuition in all departments of the College of Arts and Sciences, including premedical, preveterinary, and journalism courses, is the same. The expense for text books and equipment is approximately $35.00 a year, but varies slightly in the different courses. The verification fee of $10.00 is payable by new students with the application blank and is not subject to refund. The matriculation and reservation fee of $25.00 is payable each year when the application is accepted and is not subject to refund. The

tuition fee of $175.00 is payable in three installments of $60.00, $55.00, and $60.00 respectively, on the dates indicated in the University calendar. Students obliged to withdraw from college may petition the Board of Trustees for a partial refund of tuition, but the granting of such refund will be entirely at the discretion of the Board of Trustees.

Fees are payable only by postal money order, certified check, cashier's check, express money order, or telegraph order. Remittances must be made by mail to Middlesex University, Box 310, *Waltham.*

Any student whose installment of indebtedness to the college remains unpaid on the date fixed for final payment is deprived of the privileges of the college until he is reinstated. Reinstatement is obtained only by consent of the Board of Trustees after payment of all indebtedness and a reinstatement fee of $10.00.

There are no laboratory fees, but students will be charged for any unreasonable waste or breakage of materials, or any damage to apparatus or other property of the University.

Preprofessional Courses

The Premedical Course

MIDDLESEX COLLEGE offers a two-year premedical course designed to fulfill the requirements for admission to the School of Medicine, and the University reserves a place in the first-year class of the School of Medicine for those applicants who successfully complete the premedical course in the College of Arts and Sciences.

The two year premedical course includes the following subjects:

First Year		*Second Year*	
Subject	*Semester Hours*	*Subject*	*Semester Hours*
English	6	English	4
Chemistry	8	Physics	8
Biology	6	Chemistry	8
Modern Language	4	Biology	6
History	4	Modern Language	4
Mathematics	2	History	2
Government	2		

With the consent of the premedical adviser courses in Psychology, Economics, and Sociology may be substituted for any of the courses listed above except the basic sciences and English. The purpose of this premedical course is to provide the student with a sufficient knowledge of the fundamental natural sciences to prepare him for medical study, and in addition, to afford him an introduction to the general field of cultural study. In a two-year course emphasis must be placed upon a study of the basic sciences, and the amount of time that may be devoted to courses of an academic and cultural nature is necessarily limited. The premedical course includes 64 semester hours and covers an amount of instruction equivalent to more than one-half of the credit required for the baccalaureate degree.

The Seven-Year Combined Premedical and Medical Course

The College of Arts and Sciences, in conjunction with the School of Medicine, offers a seven-year course leading to the degrees of

Bachelor of Science and Doctor of Medicine. The first three years are spent in the College and are devoted to premedical and cultural study, and the degrees are conferred upon the subsequent completion of the standard four-year course in the School of Medicine.

The three-year premedical course includes the following subjects:

First Year

Subject	*Semester Hours*
English	6
Chemistry	8
Biology	6
Modern Language	4
History	4
Mathematics	2
Government	2

Second Year

Subject	*Semester Hours*
English	4
Physics	8
Chemistry	8
Modern Language	4
Biology	6
History	2

Third Year

Subject	*Semester Hours*
English	4
Biology	6
Chemistry	6
Economics	4
Psychology	4
Mathematics	4

With the consent of the premedical adviser courses in Sociology, Physics, Philosophy and Government may be substituted for some of those prescribed in the third year.

Preveterinary Course

The College of Arts and Sciences offers a one-year preveterinary course designed to fulfill the requirements for admission to the School of Veterinary Medicine, and the University reserves a place in the first-year class of the School of Veterinary Medicine for all applicants who successfully complete the preveterinary course in Middlesex College.

The one-year preveterinary course covers thirty-two semester hours and includes the following subjects:

English	6 semester hours
General Chemistry	8 semester hours
General Zoology	6 semester hours
Modern Language	4 semester hours
Animal Husbandry	4 semester hours
Social Science	4 semester hours

The Seven-Year Combined College and Veterinary Course

The College of Arts and Sciences, in conjunction with the School of Veterinary Medicine, offers a seven-year course leading to the degrees of Bachelor of Science and Doctor of Veterinary Medicine. The first three years are spent in the College and devoted to preveterinary and cultural study, and the degrees are conferred upon the subsequent completion of the four-year professional course in the School of Veterinary Medicine.

The three-year preveterinary course includes the following subjects:

First Year

Subject	*Semester Hours*
English	6
Chemistry	8
Zoology	6
Modern Language	4
Animal Husbandry	4
Social Science	4

Second Year

Subject	*Semester Hours*
English	4
Physics	8
Chemistry	8
Modern Language	4
Biology	6
History	2

Third Year

Subject	*Semester Hours*
English	4
Biology	6
Chemistry	6
Economics	4
Psychology	4
Mathematics	4

Courses Leading to The Degree of Bachelor of Science

The General Course

The general academic course leading to the degree of Bachelor of Science covers a period of four years, and comprises not less than 122 semester hours. The following selections and distribution of courses is recommended, and includes all of the preparation required for admission to the School of Medicine:

Freshman Year

Subject	*Semester Hours*
English	6
Chemistry	8
Biology	6
Modern Language	4
History	4
Mathematics	2
Government	2

Sophomore Year

Subject	*Semester Hours*
English	4
Physics	8
Chemistry	8
Modern Language	4
Biology	6
History	2

Junior Year

Subject	*Semester Hours*
English	4
Biology	6
Chemistry	6
Economics	4
Psychology	4
Mathematics	4

Senior Year

Subject	*Semester Hours*
Physics	6
Mathematics	6
Economics	4
Government	4
Philosophy	4
Geology	6

The Journalism Course

The following four-year course consisting of 122 semester hours and leading to the degree of Bachelor of Arts is recommended for students who desire to combine a general academic education with technical training in the art of journalism.

Freshman Year

Subject	*Semester Hours*
English	6
Modern Language	4
Government	2
Mathematics	2
History	4
Biology	6
Chemistry	8

Sophomore Year

Subject	*Semester Hours*
English	6
Journalism	8
Physics	8
Modern Language	4
Biology	6

Junior Year

Subject	*Semester Hours*
Journalism	8
English	4
History	4
Sociology	4
Economics	4
Psychology	4

Senior Year

Subject	*Semester Hours*
Journalism	8
English	4
Economics	4
Philosophy	4
History	4
Political Science	6

Courses of Instruction

BIOLOGY

1. General Biology.

This course is designed to acquaint the student with the principles of various life processes as illustrated in the animal type of body. Additional attention is given to the problems of development, genetics, and evolution. A brief study of plant material concludes the course, which covers eight semester hours and includes laboratory work.

2. Comparative Anatomy.

Completion of Biology 1 or its equivalent is required for admission to this course, which involves a detailed consideration of gross anatomical structure and the relation of organs and systems, based on laboratory study of the dogfish, cat, and other animals. The course covers four semester hours and includes laboratory work.

3. Botany.

This course on the morphology and physiology of the lower plants also requires the completion of Biology 1 or its equivalent for admission. It includes a general survey of the plant kingdom supplemented by laboratory work and field study, and covers four semester hours.

4. Histology.

A course in microscopic anatomy dealing with the elementary structure and physiological function of cells, tissues, and organs of the body. This course includes extensive laboratory work, and is given by the faculty of medicine. It may be elected only by advanced students in the College of Arts and Sciences.

5. Embryology.

This study of spermatogenesis, oogenesis, the growth and development of vertebrate tissues, organs, and systems is also a part of the medical curriculum. It includes laboratory work, and may be elected only by advanced students in the undergraduate school.

CHEMISTRY

1. General Inorganic Chemistry.

An introductory course dealing with the elements, their compounds, and the fundamental laws and theories of chem-

istry. This course includes laboratory work, covers eight semester hours, and is required of premedical students.

2. Organic Chemistry.

Completion of Chemistry I or its equivalent is required for admission to this course, which includes a study of the carbon compounds, of both aliphatic and aromatic derivatives, and is required of all premedical students. The instruction includes laboratory work, and covers eight semester hours.

3. Qualitative Analysis.

The course includes laboratory work in the detection and separation of the common acids and bases. The prerequisite is Chemistry I, and the course covers four semester hours.

4. Quantitative Analysis.

A study of the gravimetric and volumetric determination of the common elements and radicals. Chemistry 1 and 3 are prerequisites, and four semester hours are covered.

5. Biochemistry.

A study of the chemical substances and reactions involved in the physiological processes of animals and plants. This course is given by the medical faculty and is open only to advanced students in the academic department.

ECONOMICS

1. Principles of Economics.

An elementary course in the fundamental concepts of economics, including a consideration of their development and organization; the laws of money, credit, banking, exchange; production and distribution; the profit system and labor problems; unemployment and the business cycle. Four semester hours.

2. Advanced Economics.

This course applies the principles of economics to problems arising in the economic history of the United States, including railroad transportation, the rise and control of industrial monopolies, insurance, speculation, inflation, organization, labor movements, and the distribution of wealth and income. Four semester hours.

ENGLISH

1. English Composition.

This course includes a review of the principles of grammar and is designed to promote careful writing and to eliminate common errors in expression. It is required of all students who show deficiency in the common use of English. Four semester hours.

2. History of English Literature.

A general survey of the principal periods of English Literature from its beginning to the present day. The lectures are supplemented by quizzes, assigned reading, and book reports. Four semester hours.

3. American Literature.

Completion of English 2 or its equivalent is required for admission to this course, which includes a survey and critical study of American Literature from colonial days to the present time. The lectures emphasize the development of the American Novel. Collateral reading and book reports are required. Four semester hours.

4. Modern Drama.

This course surveys the development of Modern Dramatic Literature in England and America, and a consideration of the principles of dramatic criticism. Assigned work includes the reading of many plays and the writing of reviews. Four semester hours.

5. Elementary Journalism.

This course includes instruction and practice in the reporting and writing of news, the fundamentals of copy editing, headline writing, and newspaper make-up, and a study of the methods employed in the leading metropolitan papers and press services. Practical work is given in the gathering of news material, and the preparation of stories for publication. Eight semester hours.

6. Advanced Journalism.

This course is open to those who have completed English 5, and includes a survey of the history of English and American Journalism; a study of editorial methods and policies and

journalistic ethics; the law of libel; feature writing; editorial departments; a consideration of the principles of advertising and publicity; advanced work in news writing, reporting, and copy reading; political and editorial writing; literary criticism; and press photography. Eight semester hours.

FRENCH

1. Elementary French.

 This course is designed for those who have not passed college entrance examinations in French. It covers the principles of French Grammar, practice in reading, speaking, and writing French.

2. Intermediate Course.

 This course presupposes two years of High School French or the equivalent of Elementary French, and includes a review of grammar, training in composition and speech, and the reading of prose and drama.

3. Advanced Course.

 This course is open to those who have had one or more years of French in college, and includes oral and written composition, the reading of scientific and classical French works, and extensive use of the language in the class-room.

4. French Literature.

 This course presupposes an understanding of the French language, and includes a study of the various periods of French Literature and a consideration of the works of leading classical and modern French authors. The course is largely conducted in French.

GEOLOGY

Elementary Geology.

A course consisting of lectures, laboratory work, and field work, relating to the origin, character, and effect of man's physical environment. A study is made of the structure of the earth and the processes of change.

GERMAN

1. Elementary German.

 This course covers the fundamentals of grammar, and includes training in translation and composition.

2. Intermediate Course.

This course is intended for those who present German as an entrance requirement or who have completed German 1. It includes a review of grammar and composition, the reading of German prose, and training in the oral and written use of German.

3. German Literature.

This course is intended for those who have a sufficient knowledge of the German language to enable them to read and appreciate modern and classical German authors.

4. Scientific German.

An advanced course in the reading and writing of technical and scientific German.

GOVERNMENT

1. American Government.

This course offers a practical and well-organized study of the political framework of our National and State Governments, based on the following topics: Constitution of the United States; the President—his powers and duties; National political conventions; the Cabinet; the Congress,—Senate and House of Representatives; the Courts; the Governor—his powers and duties; the State Legislature, Committees, Legislative Procedure and Enactment of Laws. First half year. Two semester hours.

2. European Governments and Politics.

This course traces the development of the forms of government of the principal European nations, and emphasizes the importance of recent changes in European politics. Second half year. Two semester hours.

HISTORY

1. European History.

A survey of the history of Western Europe from the Fall of the Roman Empire to modern times. A panoramic study of the trends and changes in the political, social, and economic life of Europe. Four semester hours.

2. American History.

A survey of the development of the United States as a nation and a world power, tracing the economic and political

growth from the age of discovery and colonization through the Revolution, the era of westward sweep, the Civil War, reconstruction, and industrial and corporate expansion, to the World War, and the problems of the present. Four semester hours.

3. History of Modern France.

A study of the development of the French nation from the Revolution through the Napoleonic Era, the Second Empire, the Republic, the Franco-Prussian War, and the World War, to the period of re-armament. First half year. Two semester hours.

4. History of Modern Germany.

This course outlines the moulding of a world power from the German states, the career of Bismarck, the results of the Franco-Prussian War, the period of colonization and increasing friction with England, the World War, the Revolution, and the rise of Hitler. Second half year. Two semester hours.

LATIN

1. Latin Derivatives.

This course is designed to familiarize premedical students with the classical derivatives used in modern medical terminology. One semester hour.

MATHEMATICS

1. College Algebra.

Linear, quadratic and algebraic equations; permutations and combinations; infinite series; mathematical induction and determinants. Four semester hours.

2. Analytic Geometry.

The fundamental properties of conic sections and a brief introduction to the geometry of three dimensions. Four semester hours.

3. Calculus.

Differential and integral calculus, and geometrical and physical applications. Four semester hours.

PHILOSOPHY

1. History of Philosophy.

A survey of philosophical speculation from the days of Socrates and Plato to the Twentieth Century.

2. Modern Problems in Philosophy.

A discussion and analysis of the vital ethical problems of the present day, and an application to them of the philosophical principles of other periods. The principles of logic and the teachings of leaders of modern thought are considered.

PHYSICS

1. General Physics.

An introductory course in the elementary principles of mechanics, heat, magnetism, electricity, sound, and light. Lectures and laboratory experiments. Eight semester hours.

2. Heat, Sound, and Light.

A course open to those who have completed an introductory course in physics. Lectures and laboratory work in those aspects of heat, sound, and light which have some relation to the science of medicine, including geometric and physical optics. Six semester hours.

3. Modern Physics.

Open to students who have completed Physics I. A lecture and laboratory course on phenomena, theories, and methods of contemporary physics, including a consideration of alternating currents, electromagnetic waves, thermionics, photo electricity, ultra violet radiation, X-rays, radio-activity, geophysics, astrophysics, and relativity. Eight semester hours.

PSYCHOLOGY

General Psychology.

A brief survey of the elements of sensation, perception, imagination, memory, thought, volition, and the affective mental states; the driving forces of human nature; character, instinct, and habit; experience and behavior; unconscious and subconscious mental states; and the abnormal mind.

SOCIOLOGY

Introduction to Sociology.

A study of the science of human society including a consideration of human origins and development based on the science of anthropology; the relation of the family and the state; the problem of social control of delinquency, crime, pauperism, and insanity; the effect of heredity and environment on social evolution.

The School of Veterinary Medicine

Organization and Objectives

THE School of Veterinary Medicine was chartered by the legislature of the Commonwealth of Massachusetts as a department of Middlesex University, with authority to confer the degree of Doctor of Veterinary Medicine. The School aims to provide a thorough, systematic education in all the basic and applied sciences of Veterinary Medicine, and to train veterinarians so that they may adequately deal with the investigation, prevention, and cure of animal diseases.

Location, Buildings and Facilities

The School of Veterinary Medicine is located on the 96-acre campus of Middlesex University at Waltham. The courses of instruction are conducted in the newly-erected group of University buildings, which contain extensive laboratories, spacious classrooms, a library and reading-room, and offices of administration.

The University property includes a large agricultural development, with a model dairy, barns, stables, a piggery, silos, kennels, and poultry yards. The farm is well stocked, and the department of animal husbandry maintains forty head of registered cattle, farm and riding horses, swine, sheep, hens, ducks, and a comprehensive selection of all the smaller domestic and laboratory animals.

The facilities of the University Library, with its collection of scientific and cultural texts, and its files of current scientific periodicals, are available to the veterinary students. The museum collections of the University include an extensive exhibit of material in the field of anatomy and vertebrate zoology, which are used for the purposes of instruction in the School of Veterinary Medicine.

The practical training and clinical instruction of students with the material available on the University campus is supplemented

with visits to neighboring stock farms and with clinical service at animal hospitals under the supervision of members of the Faculty. The care and treatment of diseased animals is studied under actual farm conditions, as well as in the wards and operating rooms of modern animal clinics and dispensaries. Middlesex University is at present planning the erection of an Animal Hospital on the Waltham Campus, to be used particularly in the care and treatment of the larger farm animals, as well as for the ordinary household pets.

The Veterinary Profession: Opportunities and Fields of Service

There is a steadily increasing demand for the services of veterinarians in the enormous fields of livestock industry. The economic loss due to fatal diseases among animals is about $300,000,000 annually. This makes the problem of the cure and prevention of disease an urgent and outstanding task. It requires men of exceptional ability and training. There is an actual shortage of such qualified men, at the present time.

There is a broad field of openings for veterinarians in America:

General Practice. The large number of farm animals, and the increased practice of keeping valuable small animals, have favored the opportunities of private veterinary practice.

Government Service. About 1300 veterinarians are employed by the Bureau of Animal Industry, United States Department of Agriculture, as inspectors and investigators. Entrance is usually by competitive examination.

Meat Inspection. There are meat inspection stations at all large packing centers. Sanitary conditions of slaughter and curing are supervised by veterinarians.

Quarantine Service. Infections and diseases of animals are investigated and controlled by a considerable number of veterinarians.

Army Service. The Veterinary Corps of the United States Army demands veterinarians, beginning with the rank of second lieutenant. The initial salary is $1700 and quarters.

Teaching. There is a demand for expertly trained veterinarians for teaching and research in veterinary and agricultural colleges.

Municipal Food Inspection. Many cities and towns employ veterinarians to inspect meats, poultry, game, and dairy products.

There are also openings as State Veterinarians to investigate and control communicable diseases of animals.

Commercial Positions. Biologic firms, dealing in vaccines and antitoxins have veterinarians supervise the manufacture of these substances. There are also openings in railroads, in the management of livestock shipments.

Admission

The School of Veterinary Medicine is coeducational. The requirements for admission may be satisfied by graduation from a recognized college, or by the successful completion of a standard high school course and at least one year of college work amounting to 30 semester hours and including 6 semester hours each of English, Inorganic Chemistry and General Zoology. It is preferred that the candidate also present college credits in Physics, Social Science and a modern language.

Candidates who are high school graduates, but who have not yet completed the required year of college work, may enroll in the College of Arts and Sciences for the necessary year of preveterinary work. A place is reserved in the School of Veterinary Medicine for all those who successfully complete the preveterinary course at Middlesex University. Attention is directed to that part of the catalogue describing the one-year preveterinary course and the seven-year combined course leading to the degrees of Bachelor of Science and Doctor of Veterinary Medicine. Description of these courses is contained in the announcement of the College of Arts and Sciences.

Admission blanks may be obtained from the Registrar, Box 310, Waltham, and should be filed accompanied by a verification fee of $10.00 and a personal unmounted photograph. Applicants may arrange for a personal interview at the Waltham Campus, or at the Back Bay Building, 415 Newbury Street, Boston. In the case of candidates who come from outside of Massachusetts, a

personal interview may be deferred until the opening week of the school year.

The verification fee is not refundable except when the application is rejected because the limit of enrollment has been reached.

Applicants for admission to advanced standing must have the necessary qualifications for admission to the first-year class and must have satisfactorily completed one or more years of instruction in an approved School of Veterinary Medicine. For the session 1938-1939, no applications will be accepted for admission to the third or fourth years of the Veterinary course.

Special students may be admitted for selected courses if they provide evidence of satisfactory previous training; such students will not, however, be accepted as candidates for a degree.

Fees and Expenses

The verification fee of $10.00 is payable by new students with the application blank, and is subject to refund only if the application is rejected because no vacancies remain. The matriculation and reservation fee of $25.00 is payable each year when a student is notified of his admission or re-admission to the School, and is not refundable. The tuition fee amounts to $200.00 and is payable in three installments of $70.00, $60.00, and $70.00 respectively, on the dates indicated in the University calendar. Tuition fees are not refundable except at the discretion of the Board of Trustees in unusual cases of physical disability.

A graduation fee of $25.00 is payable upon notification by all successful candidates for the degree of Doctor of Veterinary Medicine.

The cost of books, instruments and equipment, and the rental of a microscope, amounts to approximately $50.00 a year. Room and board is available near the campus at an average cost of $10.00 a week.

Requirements for Graduation

Each candidate for the degree of Doctor of Veterinary Medicine must have fulfilled the following requirements:

1. He must be at least twenty-one years of age and of good moral character.

2. He must have satisfactorily completed the four-year course in separate years.
3. If he has been admitted to advanced standing from some other school he must have completed the last year at Middlesex University.
4. He must have received a passing grade in each subject of the curriculum and he must have presented a satisfactory record of clinical work.
5. He must have furnished a personal photograph and his signature for identification.
6. He must have satisfied all indebtedness to the University, including the graduation fee of $25.00.

Prescribed Four-Year Course of Study

The course of instruction extends over four years. Each academic year is divided into two semesters of not less than sixteen weeks. The basic veterinary sciences are studied in the first two years, by lectures, demonstrations, and laboratory exericses. The third and fourth years are devoted to practical clinical courses. Each course meets, in regard to its total hours, the standards set by the outstanding veterinary schools of the country.

First Year

First Term	*Second Term*
Anatomy	Physiology
Histology	Animal Husbandry
Embryology	Physiological Chemistry
Organic Chemistry	Zoology and Botany

Second Year

First Term	*Second Term*
Anatomy	Anatomy
Animal Husbandry	Pharmacology
Bacteriology and Hygiene	Physiology
General Pathology	Physical Diagnosis
Materia Medica and Pharmacy	Special Pathology

Third Year

The terms are not marked off here, since these courses either overlap the semesters, or are given intensively over shorter periods of time.

Veterinary Medicine
Diseases of Small Animals
General Surgery
Special Surgery
Obstetrics
Animal Parasites
Clinics (Medicine, Surgery, and Obstetrics)
Surgical Exercises (Bandaging and means of restraint)
Poultry Diseases
Dairy
Ophthalmology

Fourth Year

Infectious Diseases
Jurisprudence
Veterinary Medicine
Clinical Laboratory Practice
Horseshoeing
Autopsies
Diseases of Small Animals
Small Animal Clinic
Ambulatory Clinic
Market Milk and Milk Inspection
Meat Hygiene

Description of Courses

All courses are offered under the following departments of the School of Veterinary Medicine.

Anatomy	Pathology and Parasitology
Chemistry	Animal Industry
Hygiene	Medicine
Physiology and Pharmacology	Surgery and Obstetrics

Chemistry.

Organic Chemistry. Lectures and laboratory. Organic compounds of biological importance. General reactions.

Physiological Chemistry. Lectures and laboratory. Chemistry of the animal body, and analysis of foodstuffs.

Zoology and Botany.

Lectures and laboratory work covering a review of Animal Biology, and a consideration of poisonous plants, grasses, clovers, cereals, and economic plants eaten by animals. Classification, distribution, identification, control.

Animal Husbandry.

Livestock Production. Types, breeds, judging, and management of Market and Breed livestock.

Animal Feeding. Principles of feeding; nutrition; nutritional diseases; calculation of rations.

Dairy Industry. Lectures and laboratory work in the model dairy.

Genetics. Heredity and the breeding of livestock.

Poultry Husbandry. Practical instruction and visits to demonstrate the care of poultry.

Hygiene.

General Bacteriology. Lectures and laboratory. Morphology, classification, characteristics of pathogenic bacteria; infection and immunity.

Special Bacteriology. Lectures. Bacteria causing animal diseases.

Poultry Diseases and Hygiene. Control; hygiene and sanitation; diseases, nature, diagnosis, control.

Infectious Diseases. Nature, diagnosis, control.

Milk Hygiene. Lectures and laboratory. Examination of milk; milk in relation to diseases of the cow; dairy farm inspection.

Meat Hygiene. Slaughterhouses; conditions and parasites affecting meat; slaughter, inspection, preservation of products.

Veterinary Anatomy.

Anatomy. Lectures, laboratory, and dissection. The struction of domestic animals; the horse and the dog.

Histology. Lectures and laboratory. The minute structure and composition of tissues and organs. Microscopy.

Embryology. Lectures and laboratory. The development of the domestic animals; fetal membranes, malformations, growth.

Physiology and Pharmacology.

Physiology. Lectures and laboratory. Functions of animal organs and systems; biophysical principles; functional variations.

Pharmacology. Lectures and laboratory. The physiological action of drugs; preparation of drugs.

Materia Medica and Pharmacy. Lectures and laboratory. Official and other important drugs; preparation, origin, properties, action, and doses; compounding of prescriptions.

Pathology and Parasitology.

General Pathology. Lectures and laboratory. Causes and effects of disease; alterations in normal structure and function.

Special Pathology. Systemic pathology and morbid anatomy of organs and organ systems; specific infectious diseases.

Autopsies. A course in portmortem technique; examination, changes, diagnosis, reports.

Parasitology. Parasites of the domestic animals; life cycles, pathogenesis, distribution of parasites, methods of control.

Medicine.

Physical Diagnosis. Lectures and demonstrations; methods of diagnosis; symptoms of disease in the various organs.

Clinical Laboratory Practice. Blood and urine chemistry; parasitology; hematology; routine examinations.

Veterinary Medicine. Principles and practice; consideration of diseases.

Small Animal Medicine. Treatment and prevention of diseases in small animals.

Clinics. Practical instruction in veterinary medicine, including small animal diseases, and the Ambulatory Clinic.

Ophtholmology. Examination and diseases of the eyes in domestic animals.

Surgery and Obstetrics.

Obstetrics. Care of pregnant animals; diseases of the genital organs; normal and abnormal presentations.

General Surgery. Basic principles; anaesthesia, restraint, wounds, infections, bone diseases, instrumentation.

Special Surgery. Includes surgical exercises; surgical diseases of the domestic animals.

Clinic. Application and surgical technique; obstetrics.

Horseshoeing. Lectures on podology and demonstrations at the forge.

Jurisprudence. Ethics, Business Methods, government regulations, meat inspection, quarantine rules, game laws, purchase and sale of animals, examination of the soundness of animals, and the legal principles of contracts, torts, property rights, and the practice of Veterinary Medicine.

The School of Podiatry

Podiatry as a Profession

THE practice of podiatry is now on a completely professional basis in Massachusetts, and is controlled and regulated by the newly appointed, independent Board of Registration. The standing of podiatry as a learned profession was definitely established when the Legislature authorized Middlesex University to confer a doctor's degree in this science.

Unlike many of the professions podiatry offers the advantage of a relatively uncrowded field of practice. Each year the demand for trained podiatrists is increasing as the need for their services becomes more apparent, not only in general practice, but in industrial and commercial establishments, governmental departments, state and municipal institutions, and public and private schools.

Location

The School of Podiatry of Middlesex University enjoys the unique advantage of close affiliation with the School of Medicine and the College of Arts and Sciences, and the use of their excellent laboratory facilities. The clinics and class-rooms in the School of Podiatry are situated in the Back Bay Building of Middlesex University, 415 Newbury Street, Boston, half a block from the Massachusetts Avenue Subway Station. The pre-clinical work of the first-year of the course is given in class-rooms and laboratories at the Waltham Campus of Middlesex University.

The University Library contains several thousand volumes covering all recognized branches of medicine, as well as cultural subjects, and includes copies of the standard textbooks used in teaching. The Boston Public Library and Boston Medical Library are within a few blocks of the Back Bay Building.

Requirements For Admission

The requirements for admission to the School of Podiatry include graduation from a four-year high school course covering at least 15 units, or the full equivalent of a public high school education, evaluated by examination or properly certified credentials.

Students who have successfully completed one or two years of work in an approved School of Podiatry may be admitted to ad-

vanced standing. In all cases, however, the senior year must be completed in attendance at Middlesex University.

The School of Podiatry is coeducational, since this is a profession which offers equal opportunities to men and women. Students desiring to secure admission to the School may obtain application blanks by writing to the Registrar, Middlesex University, Box 310, Waltham, Massachusetts. Application should be filed accompanied by a personal unmounted photograph and the verification fee of $10.00. All students enrolled in the University are accepted for one year only, although re-admission is ordinarily granted if a student successfully completes the year's work. The University in no way binds itself to accept students for further instruction, and reserves the right to refuse admission or re-admission to any student, regardless of his educational qualifications.

Fees and Expenses

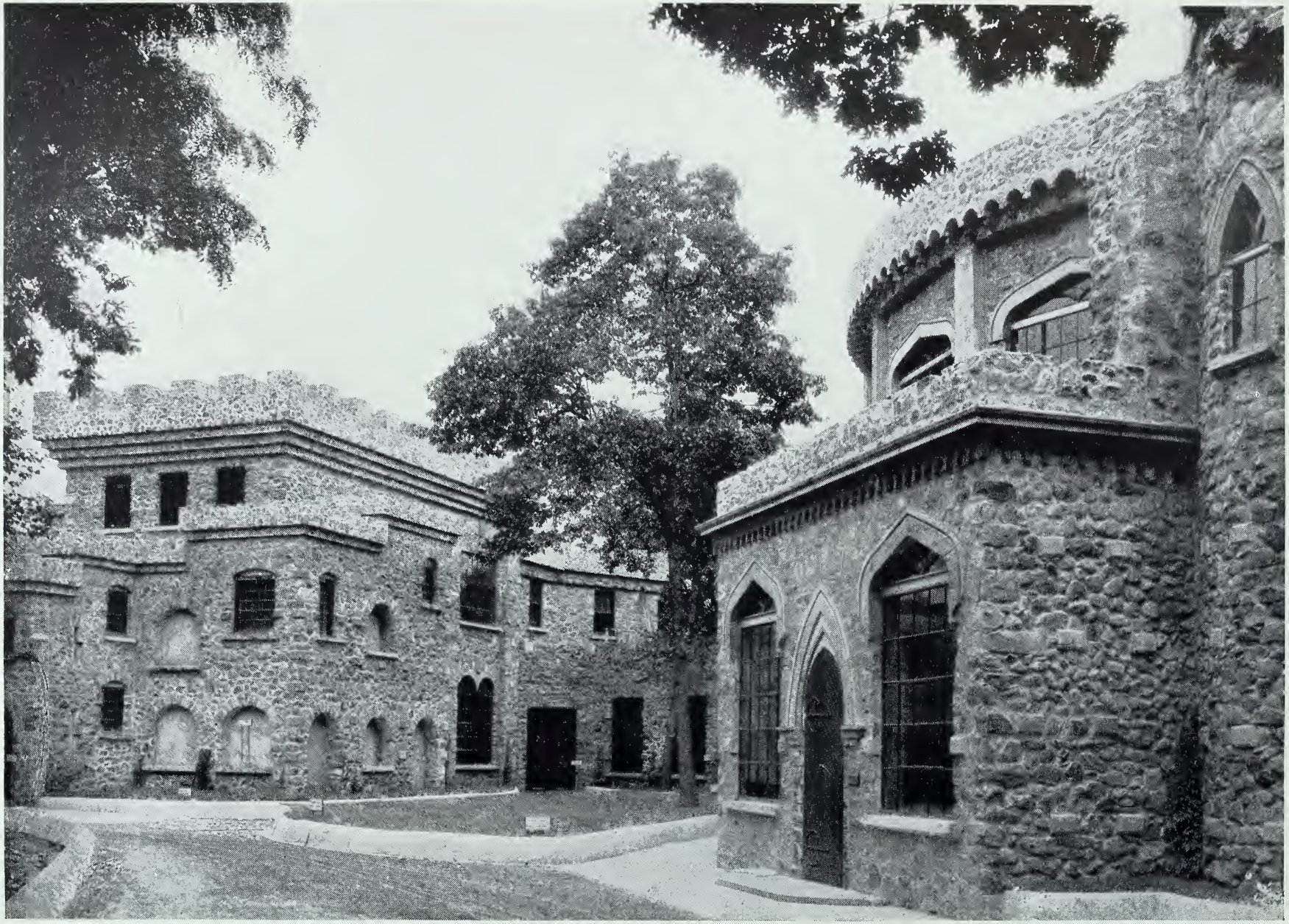
The verification fee of $10.00 is payable by new students only upon filing of the application and is not subject to refund. The matriculation fee of $25.00 is payable each year and is also not subject to refund. The tuition fee of $300.00 a year is payable in three installments of $100.00 each on the dates indicated in the University calendar.

Fees are payable only by postal money order, certified check, cashier's check, express and telegraph money order. Remittance must be made by mail to Middlesex University, Box 310, *Waltham, Massachusetts.*

The graduation fee of $25.00 is payable upon notification by all successful candidates for the Doctor's degree in Chiropody or Podiatry.

Any student whose installment of indebtedness to the college remains unpaid on the date fixed for final payment is deprived of the privileges of the college until he is reinstated. Reinstatement is obtained only by the consent of the Board of Trustees after payment of all indebtedness and a reinstatement fee of $10.00.

The cost of textbooks, laboratory equipment and instruments amounts to an average of $25.00 a year. There are no laboratory fees, except in case of unreasonable waste of material or damage to apparatus.



The College Quadrangle



Library and Reading Room

Final Examinations

The minimum passing grade is 75% in each subject.

A student who fails to appear for an examination is marked as failed. Subsequent examination will be as for removal of a condition, and a fee of $5.00 charged for each examination. Absence through certified illness may upon petition abrogate this rule.

All conditions must be removed by re-examination, by repetition of the subject failed, or of the work of the entire year, at the discretion of the Committee on Promotions.

Clinical Instruction

The most important single course in the curriculum is clinical podiatry, for it is only in the practical application of the principles of podiatry as taught in the clinic that the student may properly be trained to enter this professional field.

The Foot Clinics of Boston, operated by the Freeman L. Lowell Memorial Hospital and Dispensary at 415 Newbury Street, afford a wealth of clinical material, offering podiatry treatment to several thousand patients each year. This clinic provides free treatment to the poor and unemployed.

The clinic is finely equipped and has accommodations for the treatment of fifty to seventy-five patients nightly. So that their practical instruction may cover every phase of podiatry, the students are assigned in rotation to the various departments of the clinic, including the Diagnostic Clinic, where new patients are first examined; the Orthopedic Clinic, where the more serious mal-formations of the feet are treated; the Physio-therapy Clinic, which is equipped with modern electrical apparatus for the relief of foot ailments; the Children's Clinic, maintained for the periodic examination and treatment of school children; and the male and female divisions of the general podiatry clinic.

The Middlesex Hospital at Fourth and Otis Streets, Cambridge, is affiliated with Middlesex University and provides facilities for the care of acute or operative cases and for X-ray diagnosis. The students may follow and observe the treatment of podiatry patients in the various departments of the hospital.

Requirements for Graduation

Each candidate for the degree of Doctor of Surgical Chiropody or of Doctor of Surgical Podiatry must have fulfilled the following requirements:

1. He must be at least twenty-one years of age and of good moral character.
2. He must have satisfactorily completed the three-year course in separate years.
3. If he has been admitted to advanced standing from some other school of podiatry, he must have completed the last year at Middlesex University.
4. He must have received a passing grade in each subject of the curriculum, and he must have presented a satisfactory record of clinical work.
5. He must have furnished a personal photograph and his signature for identification.
6. He must have satisfied all indebtedness to the University including the graduation fee of $25.00.
7. He must have satisfied the Trustees that he has not only the knowledge essential to the practice of his profession, but also the moral and ethical characteristics that should be possessed by every practitioner.

Curriculum

The School of Podiatry has adopted the curriculum prescribed by the National Association of Chiropodists. The course covers three school years and the 3120 hours of instruction are distributed as follows:

Basic Sciences

Anatomy (to include embryology and histology)	256
Chemistry	192
Bacteriology and Biology	128
Physiology (to include mechanics and muscle physiology)	224
Hygiene and Sanitation	96
Pathology	128
Total hours	1024

Podiatry

Surgical Podiatry	224
Foot Orthopedics	224
Foot Gear	64
Physical Therapy	224
Clinics	600
Total hours	1336

Cultural

Ethics	8
History of Medicine and Podiatry	8
Jurisprudence	16
Professional Economics	8
English	64
Total hours	104

Medicine

Materia Medica, Pharmacy, and Therapeutics	176
Surgery	96
Neurology	32
Psychology, Applied Psychology and Psychiatry	32
Dermatology and Syphilology	96
Orthopedic Surgery	32
Roentgenology	64
Medical Diagnosis and Podiatric Medicine	112
Emergencies	16
Total hours	656

Instruction in the School of Podiatry includes didactic lectures, clinical observation and treatment, dissection, and laboratory work in the basic and medical sciences. The curriculum, designed to conform to the requirements of the Massachusetts Board of Registration in Podiatry, is divided into three years of instruction of not less than 32 weeks in each year. The subjects and

hours are distributed according to the following schedule, which may be altered at the discretion of the Trustees:

First Year

Anatomy, including embryology, histology, and dissection	224
Chemistry	192
Bacteriology and Biology	128
Physiology	192
English	64
Physical Therapy	128
Clinics	24
Foot Orthopaedics	32
Surgical Podiatry	32
Pharmacy	64
	1080

Second Year

Surgical Podiatry	96
Foot Orthopaedics	96
Foot Gear	64
Physical Therapy	32
Clinics	288
Anatomy	32
Physiology	32
Hygiene and Sanitation	32
Pathology	96
Ethics, History of Medicine and of Podiatry	16
Materia-Medica	48
Surgery	64
Neurology	32
Dermatology	64
Medical Diagnosis	32
	1024

Third Year

Surgical Podiatry	96
Foot Orthopaedics	96
Physical Therapy	64
Clinics	288
Orthopaedic Surgery	32
Dermatology	32

Roentgenology	64
Podiatric Medicine	80
Therapeutics	64
Surgery	32
Psychology and Psychiatry	32
Emergencies	16
Hygiene and Sanitation	64
Pathology	32
Jurisprudence	16
Professional Economics	8
	1016

Description of Courses

The medical subjects in the curriculum are taught under the supervision of the Faculty of the School of Medicine and the academic subjects by the Faculty of the College of Arts and Sciences. A description of these courses is included in that part of the general catalogue pertaining to those departments.

Anatomy.

The course in this field includes study of embryology and histology; lectures and quizzes are supplemented by work in well-equipped modern laboratories, and by a thorough course in the dissection of the lower extremity in the well-lighted and ventilated Dissecting Room of the School of Medicine.

Chemistry.

Instruction of college grade in elementary inorganic and organic chemistry and in qualitative analysis, including a thorough laboratory course.

Bacteriology and Biology.

The work in these courses corresponds to that of the general Zoology course in the College of Arts and Sciences, in addition to a condensation of the course in Bacteriology, as taught in the School of Medicine. Again the spacious laboratories of these departments are available for the instruction of the Podiatry students.

Physiology.

Didactic instruction in the essentials of human physiology, with a general consideration of the phenomena of digestion and circulation. Special emphasis is placed on the lower extremities including

the physiology of locomotion, and the functions of the muscles and skin.

Hygiene and Sanitation.

An application of the general principles of Hygiene to specific problems arising in the practice of Podiatry.

Pathology.

Lectures in Pathological phenomena relating to Podiatry, supplemented by laboratory examination of gross and microscopic tissues. Emphasis is placed upon the abnormal conditions of the lower extremities including inflammation, infection, circulatory diseases, neoplasms, and other lesions of the foot.

Surgical Podiatry.

The lectures in the general field of Podiatry constitute the major study during the three years of the curriculum and are supplemented with frequent written and oral quizzes and closely correlated with clinical observation and training. Instruction covers the history and ethics of the practice of podiatry; the treatment of general foot ailments by medical, mechanical, and surgical means; and includes care of instruments, asepsis and antisepsis, foot hygiene, prophylactics, professional economics, office procedure, and all subjects relating to the practice of Podiatry that are not specifically covered in other courses.

Foot Orthopaedics.

Didactic lectures, coordinated in the second and third year with clinical training, in the etiology, diagnosis, and treatment of foot deformities and disturbances in the mechanics of locomotion. The subject includes strapping, plaster casts, posture, braces, and other means of therapy exclusive of major surgery.

Foot Gear.

A didactic course in the study of shoe materials and construction in their etiological relation to foot ailments, with emphasis upon the proper methods of alleviating foot abnormalities by shoe alteration and the prevention and cure of distress and disease by proper prescription and fitting of foot wear. Particular attention is paid to the problems of children's shoes. Various aspects of this course such as the diagnostic characteristics of ill-fitting shoes are repeatedly demonstrated in the clinics.

Physical Therapy.

Laboratory and class-room instruction in this field begins with a consideration of the elements of physics and natural science and

proceeds to the application of this knowledge in the treatment of such abnormalities of gait or superficial skin diseases as may properly be treated by the Podiatrists. The student is instructed in the methods of massage and in the use and care of physiotherapy apparatus. Instruction is carefully correlated with training in the Physio-Therapy Clinic.

Clinics.

Clinical training begins in the first-year with a limited amount of observation and continues intensively in the second and third years when the student treats under the supervision of clinical instructors all types of foot disorders and is instructed in the practical use of the accepted methods of podiatry, physio-therapy, orthopaedics, shoe therapy, plaster of paris, liquid rubber technique, and pharmaceutical preparations.

Materia Medica.

This course covers a thorough consideration of those medications of use in the treatment of foot ailments. Instruction includes the composition and manufacture of such preparations of the U. S. Pharmacopoeia and National Formulary that are applicable to the practice of Podiatry. The student is trained in prescription writing and considers appropriate drugs, ointments, and tinctures, from the point of view of their therapeutic value, physical and chemical properties, dosage, method of application, toxicology, and physiological action.

Surgery.

Lectures on the principles of surgery and practical work in the application of bandages, splints, and dressings, and in the use of local antiseptics. The didactic teaching is coordinated with clinical instruction, and covers the subjects of asepsis and antisepsis, treatment of new growths, wounds, infections, sprains, minor fractures, and other elements in the field of minor surgery.

Neurology

Lectures on the anatomy and physiology of the central nervous system, followed by a consideration of those diseases and disturbances of the nervous system with manifestations in the lower extremities. The didactic work is coordinated with clinical demonstrations of nervous and glandular afflictions that relate to podiatry.

Psychology

A didactic course in the elements of psychology, applied psychology, and psychiatry. Instruction begins with a brief considera-

tion of sensation, perception, imagination, memory, thought, volition, and the mechanisms of human behavior; and proceeds to an application of these principles to professional practice. The second half of the course is devoted to a study of the etiology, diagnosis, and treatment, of the various forms of mental diseases.

Dermatology and Syphilology

The histopathology, diagnosis, and treatment, of diseases of the skin, syphilitic dermatoses, and other cutaneous lesions manifesting themselves in the legs and feet.

Orthopaedic Surgery

The principles of orthopaedic surgery with emphasis on the abnormalities that are manifested in the lower limbs, or that may be the outcome of foot lesions. Lectures and demonstrations concerning posture, gait, inflammation of joints, deformities, and dislocations, flat-foot, weak-foot, club-foot bow-legs, and knock-knees.

Roentgenology

Lectures and demonstrations on the principles and use of the x-ray, and the diagnosis of lesions and deformities of the foot by means of x-ray photography. Emphasis is placed on the physical laws pertaining to radiology, the precautions and methods employed in taking x-ray pictures, and the recognition of normal and abnormal foot conditions in the x-ray negative.

Medical Diagnosis and Podiatric Medicine

A study of the history, principles, and practice of medicine, and the application of methods of diagnosis and treatment to foot lesions and to diseases that manifest themselves in the lower extremities.

Emergencies

Instruction in the methods of first-aid, and the temporary treatment of wounds, burns, hemorrhage, shock, fractures, fainting, fits, hysteria, cardiac conditions, and other emergencies.

English

Composition and Literature. A course designed to prepare the practitioner to express himself effectively in the speech and writing demanded in his professional and social life.

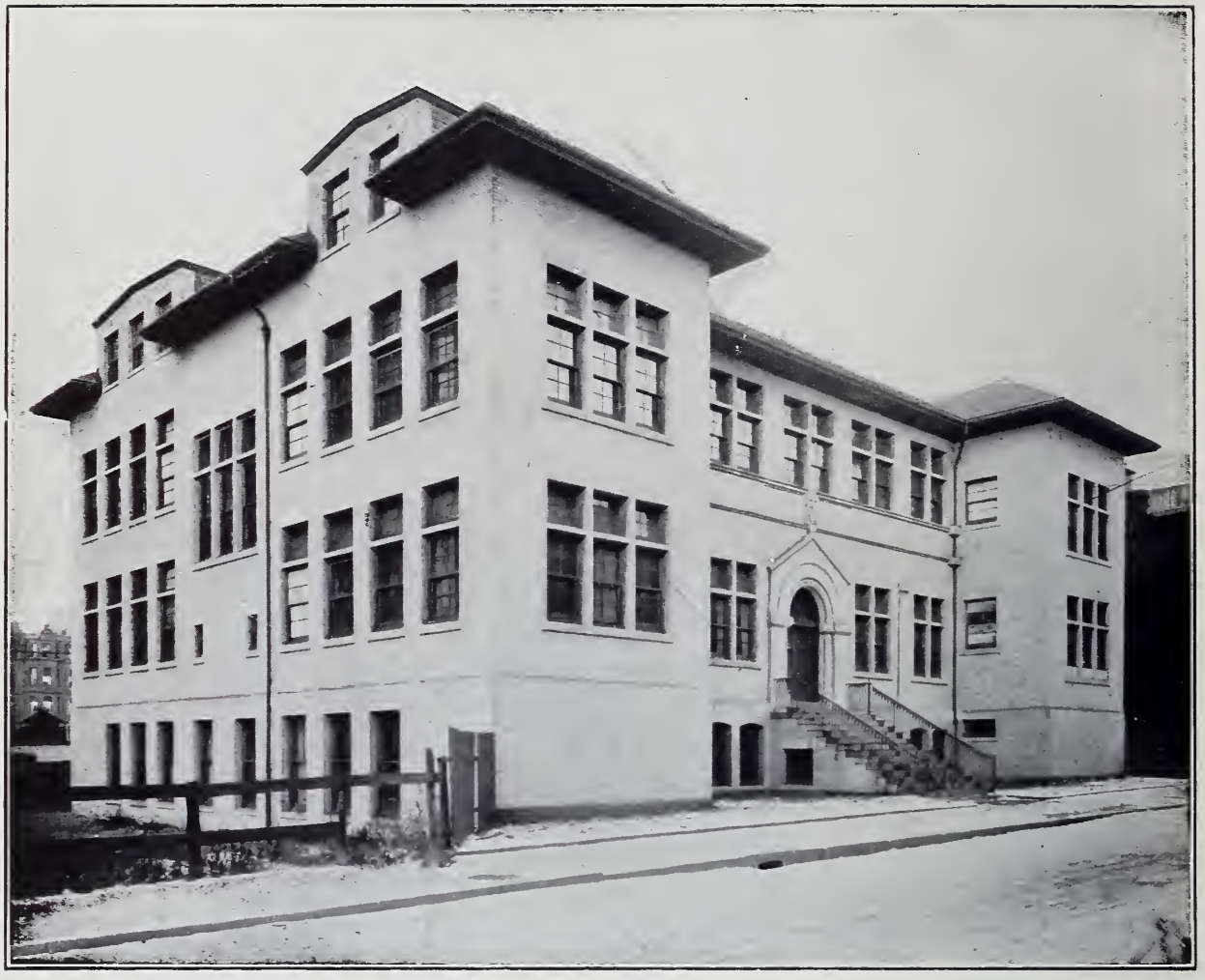
Jurisprudence

A study of the legal principles applicable to the practice of podiatry, including a consideration of the elements of contracts, agency, torts, malpractice, and the specific statutes governing professional conduct.



THE CAMPUS IN SUMMER

The Norman-Gothic buildings on the Waltham Campus of Middlesex University are covered with English ivy, and surrounded with verdant lawns and trees. In the left foreground is the Washington Tercentenary Gateway, leading to the Medical Quadrangle.



The Back Bay Building

This two-and-a-half story yellow brick building, centrally located at 415 Newbury Street, Boston, is owned by Middlesex University and houses the School of Pharmacy and the clinical departments of the School of Podiatry. It also contains a gymnasium and running track.

The School of Pharmacy

Scope of Course

MIDDLESEX UNIVERSITY is now conducting a two-year course in pharmacy, designed to prepare students for the practice of this profession, and to supplement the practical drug store experience which is a prerequisite for the examination of the Massachusetts Board of Registration in Pharmacy. Like all other departments of the University, the School of Pharmacy is coeducational.

The two-year course in Pharmacy will be offered for the school year of 1938-1939, *but the University is planning to inaugurate a standard four-year course in Pharmacy, leading to the degree of Bachelor of Science, beginning with the school year of* 1939-1940.

The four-year course will be designed to conform to the standards established by the American Association of Colleges of Pharmacy and to the requirements of the National Association of Boards of Pharmacy. Since the Massachusetts requirements for registration in Pharmacy do not yet include a degree in that subject, the two-year course will be continued until the University is ready to offer the four-year degree course.

The two-year course is comprehensive and is planned for the benefit of those who cannot afford to spend four years at college. It provides a pharmaceutical education of academic grade at a reasonable cost. The object of the course in pharmacy is to provide a scientific foundation for the pursuit of pharmacy in all of its branches,—to train students of ability and character to compound prescriptions, manufacture pharmaceutical preparations, operate drug stores, enter hospital practice, and engage in pharmaceutical teaching and research.

Those who successfully complete the two-year course receive a diploma of graduation in pharmacy. The course, however, does not lead to a degree. The curriculum has been planned so as to include all of the essential features of a longer course, omitting only subjects which, though cultural and useful in a general way, are not a necessary part of the preparation for pharmacy practice.

Students in the School of Pharmacy are required to pursue elementary courses in the basic sciences of botany and chemistry, and then rationally to consider their application to pharmacy. The general courses are followed by specialized didactic and laboratory instruction in the various divisions of the field.

Location and Equipment

The School of Pharmacy is situated in the Back Bay Building of Middlesex University, at 415 Newbury Street, Boston, near the Massachusetts Avenue Subway Station. Its central location makes it accessible by automobile, all car lines and railroads. The School is housed in a modern, well-lighted structure with abundant floor space in laboratories, lecture-rooms, offices, and a model drug store. The basement contains a large gymnasium, and a recreation room for students.

All laboratories are equipped with apparatus, materials, and supplies necessary for practical instruction, and contain benches with gas, water, shelves, and lockers for the individual student. There is a growing collection of crude official and non-official drugs.

Through generous donations from chemical houses and pharmaceutical manufacturers, there has been equipped a room serving as a model drug store. Commercial pharmacy is taught by this means, including the merchandising of drugs and sick-room accessories, buying, advertising, salesmanship, inventories, window-display, and decoration.

Middlesex University possesses several acres of ground available for a Pharmaceutical Experiment Station. Any sufficiently well-grounded student in pharmacognosy may under special supervision avail himself of the opportunities offered in the development of a botonical garden.

The University Library and Reading Room is open to the students of the School of Pharmacy, and the vast resources of the Boston Public Library and the Boston Medical Library are within a few blocks of the Back Bay Building. Current copies and files of the leading pharmaceutical periodicals are available at the School.

Admission

Applicants for admission must either have completed a four-year course in an accredited high school, including 15 units in selected subjects, or they must have an equivalent education, as shown by certificate or examination.

Although any standard high school course is acceptable, it is recommended that applicants present credits that include physics, chemistry, or biology. It is also highly desirable that students complete one or more years of practical drug store experience enrolling in the two-year course. Many states require four-years of drug store experience, including time spent in a school of pharmacy, as a prerequisite for the examination for the pharmacist's license.

Application blanks may be obtained from the Registrar of the School of Pharmacy, 415 Newbury Street, Boston; and should be filed accompanied by a personal photograph and the $10.00 verification fee. Applications are acted upon in the order of filing and should be submitted well in advance of the beginning of the school year in September.

Absences

A student is expected to attend every college exercise assigned to him. In case of extended illness, a physician's certificate should be presented to the office of the school.

Examinations and Promotion

Written and oral tests are given at intervals decided upon by the faculty. The standing of the student is based upon these ratings, and the results of the final examinations.

Students who are conditioned in the first year must remove these conditions before being admitted to the second year.

A student to be promoted to the second year must pass all courses with a grade of at least 75 per cent.

Requirements for Graduation

Candidates for graduation must be of good moral character, must have satisfied all their financial obligations to the University, and must have attained a passing grade in all subjects of the two-year curriculum. Each candidate must satisfy the Trustees that

he has not only the knowledge essential to the practice of pharmacy, but also the moral and ethical qualities that a practitioner of that profession should possess.

Fees and Expenses

The verification fee of $10.00 is payable by new students with the application blank and is not subject to refund. The matriculation and reservation fee of $25.00 is payable each year when the application is accepted and is not refundable. The tuition fee of $225 is payable in three installments of $75.00 each on the dates indicated in the University Calendar. Students obliged to withdraw from the School may petition the Trustees for a partial refund of tuition, but the granting of such refund will be entirely at the discretion of the Board of Trustees.

Fees are payable only by postal money order, certified check, cashier's check, express or telegraph money order. Remittance must be made by mail to Middlesex University, Box 310, *Waltham.*

Any student whose installment of indebtedness to the college remains unpaid on the date fixed for final payment is deprived of the privileges of the college until he is reinstated. Reinstatement is obtained only by consent of the Board of Trustees after payment of all indebtedness and a reinstatement fee of $10.00.

There are no laboratory fees, but students will be charged for any unreasonable waste or breakage of materials, or any damage to apparatus or other property of the University.

The average cost of text books and equipment in the pharmacy course does not exceed $25.00 a year.

Curriculum of the Two-Year Course in Pharmacy

The schedule of classes is tentative and may be altered at the discretion of the Trustees.

Junior Year

Hours	*Monday*	*Tuesday*	*Wednesday*	*Thursday*	*Friday*
9-11	Inorganic Chemistry	Inorganic Chemistry	Operative Pharmacy	Qualitative Analysis	Operative Pharmacy
11-12	Physiology	English	Pharmaceutical Latin	Botany	Art of Compounding Prescriptions
12-1	Recess	Recess	Recess	Recess	Recess
1-2	Toxicology and Posology	First Aid	Public Speaking	Business Law	Pharmaceutical Jurisprudence
2-4	Pharmaceutical Arithmetic	Theoretical Pharmacy	Pharmaceutical Arithmetic	Theoretical Pharmacy	Inorganic Materia Medica

Senior Year

9-10	New and non-official Remedies	Histology	Zoology	Physics	Pharmacognosy
10-12	Organic Chemistry	Organic Chemistry	Operative Pharmacy Laboratory	Quantitative Analysis	Operative Pharmacy Laboratory
12-1	Recess	Recess	Recess	Recess	Recess
1-3	Art of Compounding Prescriptions	Theoretical Pharmacy	Pharmaceutical Chemistry	Theoretical Pharmacy	Organic Materia Medica
3-4	Bacteriology	Biochemistry	Merchandising, Advertising, and Salesmanship.	Drug Store Accounting	Economics

Description of Courses

Bacteriology.

The morphology, physiology, and cultivation of bacteria and related organisms. Practical work in preparation of media, sterilization, vaccines, cultural studies of micro-organisms.

Botany.

An introductory course in plant study; structure and function of plants; taxonomy. Systematic study of the ferns and phanerogams. Emphasis is placed upon plants which yield the official drugs.

Chemistry.

Inorganic Chemistry. Lectures and laboratory. A study of the basic laws and theories of chemistry; elements and compounds; the properties and manufacture of chemical drugs.

Qualitative Analysis. Lectures and laboratory. The reactions of acid and basic radicals; tests on known and unknown solutions; tests for identity and impurities.

Organic Chemistry. Lectures and laboratory. The carbon compounds, with special reference to those used in pharmacy; the aliphatic and aromatic series; alkaloids, drugs, essential oils; identification and purification of substances.

Quantitative Analysis. Volumetric and gravimetric analysis. Assay of drugs.

Pharmaceutical Chemistry. A review of chemical principles; application to drugs; properties and manufacture of drugs.

Biochemistry. Proteins, fats, carbohydrates; blood and urine; vitamins and enzymes; chemistry of the vital processes. Practical examination of blood and urine.

English.

Composition; literature. A course designed to enable the student to express himself effectively in the speech and writing demanded in his professional and social life.

Economics and Commercial Pharmacy.

Economics. A study of the basic laws and of the forces behind present economic changes; the organization of industry.

Advertising, Merchandising, Salesmanship, Display. Lectures and practical work, including display, arrangement, location, capital, financing, merchandising, advertising, salesmanship, and store management.

Business Law and *Pharmaceutical Jurisprudence.* A study of the legal principles applicable to the practice of pharmacy. These are of especial importance to the owner or manager of a drug store. The course includes a consideration of contracts, agency, torts, and the specific statutes governing the sales of drugs, narcotics, and poisons.

Drug Store Accounting. Principles of accounting; books of original entry; ledgers; books of final entry; construction and analysis of work sheets; partnerships, corporations; classification of balance sheet items.

First Aid and Physiology.

The study of physico-chemical processes underlying organic behavior; the morphology and function of the organs of the human body; hygiene.

Directions for first aid; the temporary treatment of wounds, hemorrhage, fractures, and other emergencies.

Histology and Pharmacognosy.

Histology. Cells and tissues; the finer structure of vegetative and reproductive organs of higher plants; structure of those plant organs and cell contents which are used as drugs.

Pharmacognosy. The natural history of vegetable and animal drugs, especially those official in the U.S.P. and N.F.; drug culture, preparation, purity, preservation, classification.

Materia Medica, Posology, and Toxicology.

Inorganic Materia Medica. A study of inorganic and synthetic pharmaceutical substances; official names, synonyms, properties, doses, and toxicology.

Organic Materia Medica. Taxonomy of vegetable and animal drugs; official titles, synonyms, origin, parts used, nature, constituents, uses, substitutes, doses, toxicology.

Posology. Definitions of doses; factors influencing the dose; forms of the drug; time and methods of drug administration; grouping of Liquids and Solids according to quantitative dose.

Toxicology. The toxic action of the important drugs; identification of poisons, including antidotes and emergency treatment.

Pharmaceutical Latin.

Latin grammar in relation to pharmaceutical, chemical, and botanical nomenclature, prescription writing and interpretation; translation of prescriptions.

Pharmaceutical Arithmetic.

Arithmetic of the different systems; relationships among weights and measures; percentage solutions, specific gravity; weights and volumes; computation of doses.

Pharmacy.

Theoretical Pharmacy. An introduction; the history of pharmacy and its relation to medicine; a study of Pharmacopoeias, Dispensatories, the National Formulary, New and Nonofficial Remedies, and reference works; the basic pharmaceutical processes, including a study of operations, and the methods and forms of apparatus employed.

Operative (Practical) Pharmacy Laboratory. The preparations of the U.S.P., N.F., and others frequently used, are taken up, a group at a time. The course passes from the simpler to the more difficult official preparations. Representative selections of each group are prepared in the laboratory.

Art of Compounding Prescriptions. A study of the compounding of medicines, the dispensing of prescriptions, and the various kinds of prescriptions.

Hospital Pharmacy. Organization and functions of a hospital; requirements of a pharmacy department within a hospital.

Public Speaking.

Writing and presentation of speeches; voice, posture, manner of delivery; effective writing; reference material; audience analysis.

Physics.

General Physics; mechanics, heat, magnetism, electricity, sound, and light.

Zoology.

Life, protoplasm, cells; classification of animals; functions of organs and tissues; distinction between plants and animals.

GIFTS AND ENDOWMENT

Middlesex University is authorized by the Massachusetts Legislature to receive and hold donations, legacies, and bequests of real and personal property to an extent not to exceed five million dollars, and to use such property or the income therefrom for its general educational purposes.

The School of Medicine and the College of Arts and Sciences are now in immediate need of substantial endowment funds. The Trustees will be glad to receive specific gifts of books, equipment, or material for the use of any department of the University; and would be very grateful for any donation to the endowment of the University.

Bequests may be made in the following form:

I give to the Trustees of Middlesex University, an educational institution incorporated under the laws of the Commonwealth of Massachusetts, the sum of dollars, to be applied to the general purposes of the University.

MIDDLESEX UNIVERSITY

COLLEGE OF ARTS AND SCIENCES, A.B. and B.S. Degrees
Preprofessional Courses, Arts, Sciences, Journalism

SCHOOL OF MEDICINE, M.D. Degree
Two-year premedical requirement

SCHOOL OF VETERINARY MEDICINE, D.V.M. Degree
One-year preveterinary requirement

SCHOOL OF PODIATRY, D.S.C. and D.S.P. Degrees
Three-year Didactic and Clinical Course

SCHOOL OF PHARMACY
Two-year Comprehensive Course

WALTHAM — MASSACHUSETTS